THE RAILWAY GAZETTE
A Journal of Management, Engineering and Operation
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The Railway Engineer · TRANSPORT · The Railway News
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GOODS FOR EXPORT

The fact that goods made of raw materials in short supply owing to war conditions are advertised in this paper should not be taken as an indication that they are necessarily available for export

DISPATCH OF THE "RAILWAY GAZETTE" OVERSEAS

We would remind our readers that there are many overseas countries to which it is not permissible for private individuals to send printed journals and newspapers. THE RAILWAY GAZETTE *possesses the necessary permit and machinery for such dispatch, and any reader desirous of arranging for copies to be delivered to an agent or correspondent overseas should place the order with us together with the necessary delivery instructions.*

We would emphasise that copies addressed to places in Great Britain should not be re-directed to places overseas, as they are stopped under the provisions of Statutory Rules & Orders No. 1190 *of* 1940, *and No.* 359 *of* 1941

TO CALLERS AND TELEPHONERS

Until further notice our office hours are:—
Mondays to Fridays—9.30 *a.m. till* 5.0 *p.m.*
The office is closed on Saturdays

Goods for Export

THIS week we publish for the first time a formal statement to the effect that the advertisement in this paper of goods made of raw materials in short supply owing to war conditions should not be taken as an indication that they are necessarily available for export. This indicates no new policy on the part of ourselves or our advertisers, but it has become important to allay any suspicions by a section of the American public that Great Britain is seeking in any way to avoid the obligations of the British Government's undertaking, after the Lease-Lend Agrement, that raw materials of a type of which the use is being restricted in the U.S.A. on the grounds of short supply, and of which we obtain supplies from the United States, either by payment or on Lease-Lend terms, will be used in exports except in special cases. The fact that exports of the classes of goods falling within this undertaking are controlled under the export licensing system robs the suspicions of any real foundation in fact. Nevertheless, there is strong evidence that isolationist opinion in America has used advertisements of this class of goods still appearing in British periodicals circulating overseas to fan suspicions. Moreover, such advertisements have also aroused unfavourable comment in some non-isolationist circles. It has just been re-emphasised that the British Government does not desire to restrict goodwill advertising and Lt.-Colonel Lord Dudley Gordon, President of the Federation of British Industries, stressed at the 25th anniversary meeting of the Grand Council last week that considerable danger to the future of exports would result from any drastic severance of export connections, even for a short period. As he said, export trade cannot be turned on or off like a tap, and trade once lost is extremely difficult to regain.

Government's Transport Responsibilities

Mr. J. S. Nicholl, in his presidential address to the Institute of Transport on Monday last, gave some time to consideration of the Government's responsibilities toward transport in a total war, and he enumerated some of the features to be desired in a system of control which would earn the confidence of the operator. There are two aspects to such a system—the priority of movement of goods and the directing of available vehicles so that they operate to the best purpose. To succeed a system of control of this kind must combine the authority which only a Government Department can possess with the operating knowledge which can come only from long experience in the carrying industry. In the case of the railways the Government has assumed complete control, and also financial responsibility. A similar course is not possible in the case of the road transport industry because of the number and size of its constituents. The problem has been to provide the Government with what it regards as the minimum of control necessary in the national interest, and at the same time to preserve the individualism which is so valuable a feature of the industry and also to ensure to the industry reasonable safeguards that its stability will not be impaired, nor its finances unfairly depleted as a result of governmental intervention and direction. Mr. Nicholl expressed the hope that when Lord Leathers shortly announces the lines to be followed by the Ministry of War Transport they will be such as to merit approval not only of the road transport industry, but of the country as a whole.

Deaths on the Road

The gravity of the number of deaths arising from accidents on the road has frequently been stressed by the Ministry of War Transport. The latest figures of casualties, those relating to last August, showed road deaths in Great Britain as 729; this was three less than a year before, and it was the first monthly total since September, 1940, to show a reduction compared with the corresponding month of the previous year. How great is the toll levied by the roads is obvious from the fact that for the second year of war, to the end of August, deaths numbered some 10,000, which compares with 8,400 in the first year of war, and with a pre-war annual average of 6,500. The Ministry of War Transport and the Ministry of

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Information have inaugurated an intensive road safety campaign, and it has been decided to address the appeal to all road users because of a significant change in the incidence of accidents. In the first year of war the problem presented was mainly one of an increase in accidents to adult pedestrians; in the second year the increase has occurred mostly among other classes. In April of this year it was decided to record the number of injured as well as killed; the result showed that such numbers were almost 25 per cent. below those of pre-war years. The fact that accidents are fewer but more deadly than they were before the war is attributed to the heavier kinds of traffic, higher rates of speed, deterioration in the standard of driving, less supervision by the police, and strain on repair services. In addition, blackout conditions no doubt have increased accidents of a kind which are more serious in their consequence.

Overseas Railway Traffics

Increases in the traffic returns of the British-owned Argentine railways have continued and in the 13th and 14th weeks of the current financial year the advances recorded by six of the companies have reached a total of 3,207,750 pesos. The largest individual increases in the fortnight have been 1,294,000 pesos on the Buenos Ayres Great Southern and 1,156,450 pesos on the Central Argentine. It will be seen from the accompanying table that the aggregate improvement to date on the Central Argentine is over 5½ million pesos and is between 2 and 3 million pesos on each of the three other principal companies. Among Brazilian railways the Leopoldina is £137,039 up in receipts for the 40 weeks of 1941.

	No. of week	Weekly traffics	Inc. or decrease	Aggregate traffic	Inc. or decrease
Buenos Ayres & Pacific* ...	14th	1,181	+ 11	17,915	+2,266
Buenos Ayres Great Southern*	14th	2,329	+647	29,055	+2,988
Buenos Ayres Western* ...	14th	842	+213	11,110	+2,470
Central Argentine*	14th	1,878	+515	25,236	+5,565
		£	£	£	£
Canadian Pacific	40th	829,800	+ 91,000	32,541,400	+7,413,000
Bombay, Baroda & Central India	26th	317,850	+ 46,800	5,198,250	+ 342,000

* Traffic returns in thousands of pesos

Canadian Pacific aggregate gross earnings for the first eight months of 1941 amounted to £27,838,000, an increase of £6,597,800, and the aggregate net earnings of £5,252,200 show an improvement of £1,791,400.

A Simple Service to the Non-Smoker

It may seem almost trivial at this time to raise so small a point as the convenience of the non-smoking passenger on railway journeys, but an alleviation of his lot could be achieved with so slight an effort that we think it worth while, especially as a question was raised about the matter in Parliament in October 8. The point to which we would draw attention is that, although as a rule there is ample accommodation on trains for non-smokers, the labelling of such compartments often leaves a good deal to be desired, especially in blackout hours. It appears to be the practice on most railways now to put distinctive non-smoking labels on diagonally-opposite windows of non-smoking compartment, but sometimes these become partly obliterated, a fact of which advantage is apt to be taken by the inconsiderate among smokers. The cost would surely be very small, and the reward would be out of all proportion to it, if these distinctive labels were placed, not on two windows of a compartment only, but on four, and also if they were prominently displayed inside the compartment on the partitions. The latter precaution is especially desirable when blinds are drawn after dark.

The Enemy's Transport System

The importance of the part that transport is playing in the present war has been stressed frequently in these columns, where care has been taken to avoid a delusion fostered in some sections of the daily press, that the enemy's transport system is unable to cope with the strain to which it is subjected. There can be no doubt, of course, that that strain is often heavy, and that the need for according priority to military traffic has caused disturbances to civilian traffic. No doubt, too, the activities of the R.A.F. have impeded the smoothness of flow on many occasions. It should not be overlooked that the frequency with which the R.A.F. attacks railways in German and enemy-occupied territories is a recognition of their importance in the present war. When Mr. Churchill gave his review of the war situation in the House of Commons on September 30 he referred to the "ample means of transport" enjoyed by the enemy, and implicit in his statement was recognition that the Continental transport machine is not creaking its way to breakdown as some would suggest.

Hydrogen and Rail Fissures

Attempts have been made recently in the United States to shift the onus of shatter-cracking in rails from the rate and conditions of cooling to the amount of hydrogen present in the steel—that is to say, from external to internal factors. It is true that the deliberate treatment of steel ingots with hydrogen, as part of certain experiments carried out in connection with the research of the University of Illinois into the causes of transverse fissures, has demonstrably increased the liability of the rails rolled from such ingots to be badly fissured. This fact also helps to explain the greater susceptibility to fissuring of open-hearth basic than of Bessemer acid rails, as it is known that Bessemer acid steel normally contains little or no hydrogen. But whereas in the Illinois University experiments referred to above, rails rolled from hydrogen-treated ingots were found to have developed from 100 to over 200 shatter cracks, chiefly longitudinal, in specimens no more than 6 in. long, when cooled out normally in air, rails from the same ingots that had been subjected to controlled cooling down from 370° to 150° C. over a period of not less than 7 hr.—now the customary American practice—were entirely free from shatter. While this research does not permit the assumption that the presence of hydrogen is the sole cause of fissuring in rails—and British research would seem clearly to indicate that the rate of cooling is the principal factor responsible—it does make it clear that as controlled cooling prevents the development of shatter cracks in hydrogen-treated rails, it can be relied on as a safeguard against all shatter-cracking, whatever be its cause.

The Tube and the Main Line

A passenger next to us in an underground railway carriage recently remarked that it seemed almost like express travel after the main-line train which had brought him to London that morning. This long-distance train, he said, was always late and on the occasion referred to had arrived nearly an hour behind time. Our informant was particularly puzzled by the apparent lack of effort to recover any of the lost time, the last five miles into the terminus having occupied twenty minutes; in fact, the driver seemed to lose all interest in the running of the train, as a result, it was assumed, of finding every other signal against him. It is surely a rarity for any one train, at all events in this country, to be *always* late, and, were that to occur, the train would doubtless be watched closely by the Operating Department and be retimed so as to get a clearer path. As we explained to this passenger, the causes of the lost time earlier in the journey might be many and varied, including possibly the late running of connecting trains, but the driver would certainly be likely to encounter signal checks after entering the London suburban area, when, as in this instance, the business traffic was at its height.

Minimising Restricted Speed for Track Repairs

An interesting discussion has recently taken place in our American contemporary *Railway Engineering and Maintenance* as to the extent of track maintenance work which can safely be carried out without the enforcement of reduced speeds. Mr. J. B. Martin, of the New York Central System, expressed the opinion that surfacing of track involving lifts up to 2 in. may be done without reduced speed orders or flag protec-

tion, provided that it is not accompanied by extensive renewals of sleepers, and that the tamping of the sleepers keeps pace with the lift. Mr. G. M. O'Rourke, of the Illinois Central RR., while agreeing that certain division engineers of his system were of the same opinion, added as essential provisos that work in these conditions is safe only if the track is fairly straight, and trains can be seen approaching from a considerable distance. Ballast must also be unloaded close behind the surfacing in sufficient quantity, and there must be adequate labour available to ensure the prompt filling and tamping of the track referred to by Mr. Martin. But Mr. O'Rourke regarded speed restriction signs as necessary on curves, where greater lifts than 2 in. are being made, where ballast has been withdrawn from the sleepers ahead of the work or still remains unfilled behind it, and where more than three sleepers to a rail are being renewed. All Illinois Central gangs engaged on surfacing work are provided with 20 m.p.h. speed restriction signs, which they can display by hand when conditions permit, even though a nominal 10 m.p.h. fixed sign is in position, in order to reduce the time lost by trains if the more severe restriction is temporarily unnecessary.

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American Welded Boiler Tests

An all-welded boiler delivered to the Delaware & Hudson Railway in 1937 has since been subjected to periodical examinations and searching tests to ascertain how the seams and other parts were standing up to the conditions of service in ordinary freight traffic. After completion of the boiler all welded portions were X-rayed, and, to comply with Federal requirements, it was used as a stationary boiler for several weeks. It was placed on the frames of Delaware & Hudson locomotive No. 1219 in September, 1937, working on a section of the Pennsylvania Division, 130 miles in length. Three months later it was taken out of service and the jacket and lagging removed for inspection of the welds. Everything was found to be in perfect order and the same result followed further quarterly inspections, ending in September, 1938. In April, 1939, when the first half-yearly inspection was made, a hydrostatic test was applied at a pressure of 340 lb. per sq. in.; inspection again showed that no defects had occurred, no signs of simmering or leakage at any of the welded seams being observable. Up to this time the engine had covered 105,000 miles in service; this mileage was increased to 134,000 miles by November 17, 1939, when the second half-yearly inspection was made and everything again found to be in order. The first annual inspection was carried out in July, 1940, the locomotive being then in its third year of service, and all portions of the boiler were found entirely satisfactory. Two more inspections are to be made, one in the present year and the last in 1942, and a general report will then be prepared and submitted to the I.C.C. Bureau of Locomotive Inspection. The boiler was constructed by the American Locomotive Company at its Dunkirk, N.Y., shops.

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Return of the Sandwich

At one time the eating of sandwiches in railway carriages was regarded as a sign of parsimony, and of a narrow-minded lack of faith in the company's ability to carry out its catering liabilities. Today, when ominous hints abound in every timetable that all restaurant cars are liable to be withdrawn without notice or apology, the sandwich has regained respect as an indication of prudence. No longer is it confined to the third class. We have seen a first class passenger produce one from an attache case that might well have contained those important documents attention to which while travelling is ingeniously argued as a justification for retaining first class carriages on long-distance trains. He did not masticate his sandwich behind the friendly screen formed by the raised lid of his case, to emerge later crimson and crumby in the manner of those who prefer to hide their appetite, but sat in his corner like little Jack Horner, with no less certainty of general approbation. Had a restaurant car steward suddenly appeared and, bowing ironically, enquired, " Are you taking dinner, sir ? " we have no doubt he would have answered in the affirmative with perfect composure and truth.

The New Railway Agreement

THE revised financial agreement between the Government and the controlled railways has escaped attack and criticism no more than the predecessor it is designed to replace. Certain sections of the community, always vocal in these matters, have not disguised their disappointment that the Government has decided not to adopt the advice they have given so freely and with so little practical knowledge, to nationalise the transport system of the country. The new agreement, which provides for renting the railways by the State, has also been criticised on the grounds that its terms are unduly generous to the transport systems. How little substance there is in these protestations is easy to see if one is prepared to delve far enough into the facts of the case, to divest one's mind of prejudice, and to approach the problem from the basis of equity. On this basis the original agreement by no means can be judged generous to the proprietors of the railways; nor can the second. At best it assures a very meagre return upon the capital which has been invested in the undertakings and without which, allied to the patience which, perforce, has been exercised by a long-suffering body of stockholders, the railways of this country could not have reached their present high standard of efficiency which has contributed so greatly to the successful prosecution of the war.

Of recent years there has been all too prevalent an idea that the standard revenue which was fixed by the Railways Act, 1921, as fair and reasonable and in the public interest, is beyond the possibility of attainment—that the £51,359,000 at which it now stands has become but a mythical figure. It should be remembered that Parliament considered the attainment of that standard revenue was so expedient in the public interest that it placed a duty on the Railway Rates Tribunal to fix charges so as to enable a company to earn its standard revenue. Although it is a fact that Parliament's object was not attained in the case of all the railway companies, this has been due very largely to acute and unregulated competition by road interests. There can be no doubt that in present circumstances the railway companies could earn their standard revenues, and this much has been admitted by responsible ministers ; in fact, although no figures have been published, it is believed that certain companies have achieved their standard since the outbreak of war. Moreover, the use made now of the capital provided by the railways is much greater than in the period before the war, and includes the use of assets which then were operated at a loss, but were continued in use to meet conditions which now exist. Taking into consideration the relative service of the capital of the London Passenger Transport Board, a total of £56,853,000 would be required as the total standard revenue of the whole of the undertakings, and it is this figure which should be borne in mind when comparisons are made with the fixed annual net revenue of the five major parties in the revised arrangements which provide for a rental of £43,000,000 in addition to the net revenue from certain excluded items.

It must not be overlooked that in agreeing to the revised agreement, the main details of which were outlined in THE RAILWAY GAZETTE of October 3, the railway companies have made considerable sacrifices. There can be no doubt that in this they were influenced by two main factors; these were that the national interest in the present emergency had to be paramount, and that ordinary commercial considerations, within reasonable limits, had to be subordinated to that interest; and that although the fixed annual payment of £43,000,000 could not be taken as representing the existing or potential earning capacity of the undertakings—there can be no doubt that the earnings, even for 1941 so far, have been proportionately much in excess of the fixed payment—they could not leave out of consideration the fact that conditions might arise which would substantially affect earning capacity, such as, for example, an invasion of this country or a decline in traffics towards the end of control. In agreeing to the new arrangements the railways and the transport board have foregone the substantial sum due to them as a result of the considerable lag which arose from the fact that under the old agreement fares and charges were not adjusted promptly to meet increases in working costs. More-

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over, the controlled undertakings have given up the pooling arrangement, under which at least some of them would have received their standard revenue, and are also giving up the right to charge as revenue expenditure the cost of restoring war damage up to a maximum of £10,000,000 a year, and to recover that cost through increased charges.

On the other hand the undertakings will receive the annual payment of £43,000,000 during the whole period of control irrespective of what contingencies may arise, and they will retain for their own account the sums charged against the pool account in 1940 in respect of the cost of restoring war damage. There can be no doubt that on balance the arrangement cannot be viewed as particularly favourable financially to the railways and London Transport, nor can it be suggested that the £43,000,000 is a subsidy to the railways. On the contrary, the railways are subsidising the Government at the present time, for even at the present level of charges there can be no doubt that the £43,000,000 will be substantially exceeded. It has to be remembered that the railways and the board are very large undertakings; the gross expenditure of the pool in 1940 to operate these undertakings for war purposes was £203,500,000, and the annual labour bill is over £150,000,000; the capital spent on providing the undertakings is £1,300,000,000. These figures put the £43,000,000 rental, which incidentally includes the revenue from ancillary businesses, in its proper perspective, which is that it is a return of under 3½ per cent. on the capital.

It is all to the good that the new financial arrangements make more definite provision for maintenance than those which were in operation during the last war by providing for meeting arrears in maintenance both during and at the end of control; they will avoid many of the difficulties which arose at the end of the last war on this account. As has been pointed out already in THE RAILWAY GAZETTE of September 5, there is little ground for the view in some quarters that under the new agreement there will be no further increases in charges. The agreement is apparently worded with some care on the point and refers to " minimising the impact " of increased costs of transport on the prices of essential goods and services. There can be no question of the desirability that charges should be raised against Government Departments concerned, even if only on some broad basis, as if they are not, there must not only be a tendency to extravagance, but failure to do so would severely deplete the revenues of the companies. Although ostensibly this would be the concern of the Government, since it is receiving revenues against making the fixed payment, there is another point to be considered; this is that if railway revenues are seriously depleted a cry may be raised that the Government is subsidising the railways, when on a true basis the reverse is the case. It would be helpful if a record were to be kept of variations in costs of labour and materials for each year of control, and if the Government were to continue to publish an annual statement giving the financial results of the controlled undertakings and recording the effect of the variations in these costs.

Second Class 50 Years Ago

IN view of the recent abolition of first class accommodation on local trains in the Greater London area, it is interesting to recall that just half a century ago the suggested general abolition of the second class was attracting a considerable amount of attention. At that time an interesting table was prepared by Mr. Alfred Aslett, Secretary of the Cambrian Railways Company to show the percentages of first, second, and third class passenger traffic, in respect of the year ended December 31, 1890, and we reproduce this from page 40 of our constituent, *The Railway Times*, for January 9, 1892. It will be seen that very few companies were then without second class, excepting the Midland which abolished it in 1875, and the Great North of Scotland which had never had it. Footnotes, however, record that the change was made generally on the Manchester, Sheffield & Lincolnshire on April 1, 1891, and on the Cheshire Lines on January 1, 1892. During the next twelve months the subject exercised the minds of the railway directorates and many changes took place. The Great Eastern Railway discontinued second class on January 1, 1893, with the exception of boat trains and London suburban trains. A neighbouring company to abolish second class at this period was the London Tilbury & Southend, which took this step in respect of its lines east of Tilbury on January 1, 1893, and for the balance on April 1, 1893. An important date in the movement was May 1, 1893, for on that day second class disappeared on the Highland Railway; on the North Eastern Railway (excepting on Tyneside); on the Great Northern Railway (except south of Hatfield); on the Caledonian Railway; and on all Anglo-Scottish services. The tide had then spent its force, however, mainly by reason of the antagonism of the London & North Western Railway which retained second class generally until the end of Lord Stalbridge's chairmanship on January 1, 1912, together with the Lancashire & Yorkshire, North Staffordshire, Maryport & Carlisle, and Cambrian Railways. Subsequent gradual changes were recorded in Mr. Charles E. Lee's article on Passenger Classes in THE RAILWAY GAZETTE of October 10, 1941, pages 351-4.

Railways	No. of passengers			Receipts		
	1st	2nd	3rd	1st	2nd	3rd
Brecon & Merthyr	1·0	2·0	97·0	3·2	4·1	92·7
Caledonian (*b*) (*e*)	5·7	1·7	92·6	15·5	2·2	82·3
Cambrian	1·6	4·0	94·4	4·6	5·8	89·6
Cheshire Lines (*h*)	5·0	3·9	91·1	8·8	3·6	87·6
Cleator & Workn. Junction	1·5	5·5	93·0	4·1	7·9	88·0
Cocker. Kes. & Penrith ...	2·4	3·4	94·2	8·1	7·1	84·8
Colne Valley	1·5	2·2	96·3	7·1	6·9	86·0
Eastern Midlands (*a*) ...	3·0	—	97·0	7·7	—	92·3
East & West Junction ...	2·2	2·2	95·6	10·3	5·4	84·3
Festiniog	3·5	3·7	92·8	7·3	6·4	86·3
Furness	2·2	4·8	93·0	6·2	6·6	87·2
Glasgow & S.W. (*a*) (*b*) ...	4·8	—	95·2	13·1	—	86·9
Great Eastern	2·1	7·6	90·3	10·7	8·0	81·3
Great Northern (*e*) ...	2·7	4·7	92·6	13·5	6·1	80·4
Great North of Scotland (*a*) (*b*)	4·8	—	95·2	11·4	—	88·6
Great Western	2·5	8·7	88·8	8·6	12·1	79·3
Highland (*c*)	6·5	2·4	91·1	20·8	4·8	74·4
Hull & Barnsley	1·0	1·0	98·0	1·7	3·0	95·3
Lancashire & Yorkshire ...	2·3	3·8	93·9	4·6	4·6	90·8
London & North Western ...	3·0	5·2	91·8	13·6	9·4	77·0
London & South Western ...	5·2	9·6	85·2	14·8	13·3	71·9
London Brighton & S. Coast	3·8	6·5	89·7	15·2	13·4	71·4
London Chatham & Dover...	6·0	10·0	84·0	18·4	20·7	60·9
London Tilbury & Southend	2·1	5·5	92·4	7·5	12·6	79·9
Manchester & Milford ...	1·0	2·9	96·1	2·8	6·2	91·0
Manch., Sheff. & Lincs. (*g*) ...	1·5	2·1	96·4	5·0	3·2	91·8
Maryport & Carlisle ...	1·9	2·9	95·2	5·0	4·8	90·2
Midland (*a*)	3·5	—	96·5	12·1	—	87·9
Midland & S.W. Junction ...	1·1	3·1	95·8	2·9	6·0	91·1
Neath & Brecon	0·7	0·3	99·0	3·9	1·0	95·1
North British (*b*) (*e*) ...	5·6	0·3	94·1	13·8	1·2	85·0
North Eastern	1·4	1·7	96·9	8·0	3·6	88·4
North Staffordshire ...	2·1	5·1	92·8	6·7	6·5	86·8
Pembroke & Tenby	1·4	9·6	89·0	4·2	13·0	82·8
Rhymney	0·9	3·1	96·0	2·3	6·5	91·2
South Eastern	3·5	8·9	87·6	16·9	17·0	66·1
Taff Vale	1·2	5·5	93·3	2·6	7·9	89·5
West Lancashire	0·6	0·9	98·5	2·6	1·9	95·5
Wrex., Mold & Con. Qy. ...	0·7	0·9	98·4	1·2	1·6	97·2
Average p.c. of above ...	2·7	3·7	93·6	8·4	6·3	85·3
" for 1886 ...	3·2	5·0	91·8	9·4	8·2	82·4
" for 1885 ...	3·7	5·5	90·8	10·5	8·9	80·6
" for 1884 ...	4·0	5·8	90·2	11·2	9·5	79·3

The undermentioned lines are shown separately, owing to the exceptional nature of the traffic :—

Railways	No. of passengers			Receipts		
	1st	2nd	3rd	1st	2nd	3rd
Mersey	4·4	25·5	70·1	8·0	30·0	62·0
Metropolitan	7·1	18·9	74·0	11·6	22·6	65·8
Metropolitan Dist.	8·3	17·9	73·8	15·5	22·4	62·1
North London (*d*)	7·0	27·1	65·9	10·6	29·9	59·5

(*a*) No second class accommodation on these lines
(*b*) Year ending January 31, 1891
(*c*) Year ending February 28, 1891
(*d*) All passengers carried at fares of 1d. a mile or under dealt with as third class
(*e*) Second class fares are in operation only on sections of these lines
(*f*) Year ending June 30
(*g*) No second class fares in operation on this line, except for Manchester suburban traffic, from April 1, 1891
(*h*) Second class fares were abolished on this line from January 1, 1892

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LETTERS TO THE EDITOR

(The Editor is not responsible for the opinions of correspondents)

Bull-Head and Flat-Bottom Track

White Cottage, Sudbrook Lane,
Petersham, Surrey
September 26

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Mr. L. N. Rawes's points, published in THE RAILWAY GAZETTE of September 26 are good propaganda for an excellent type of flat-bottom track, with which I am well acquainted. However, though I do attach great importance to few parts, a simple construction, and easy handling, I should not like to be credited with the opinion that " simplicity is the guiding principle in the selection of type of track."

Yours faithfully,

E. R. HONDELINK

"The Railway Gazette" in Wartime

University of Iowa,
Bureau of Business Research,
Iowa City, August 11

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Please find enclosed a draft to cover my subscription to THE RAILWAY GAZETTE. I think it quite remarkable that, in view of the manner in which transatlantic mail must suffer, because of German depredations, so few copies of THE RAILWAY GAZETTE have failed to reach me in regular course. Several have come in such condition that the suggestion of contact with water was clear; none the less, these were legible and will be satisfactory to bind.

Let me congratulate you most sincerely upon the high caliber of THE RAILWAY GAZETTE during another year of exceeding difficulty. I look forward to the arrival of each successive copy and read it with care. The picture which you give of the railway operations in Britain, as well as the light which you throw upon operations elsewhere—particularly on the Continent—I value highly. I trust that during the months ahead no greater difficulties will face you than have already been met—and I hope that conditions will develop in such a manner as to bring to you from the United States the aid needed to overcome an adversary which is no less a threat to us than to you now engaged in conflict.

Thanking you for the benefits which I have gained from THE RAILWAY GAZETTE during the year past, I am,

Very truly yours,

S. L. MILLER,
Professor of Transportation

The Grand Northern Railroad

Bordyke, Burgess Hill,
Sussex, September 26

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—The first Travelling Post Office was brought into use on the London & Birmingham Railway in 1839. Illustrations of the exterior and interior are given in *The Literary World* for November 23, 1839. On the door, below the window, and above the Royal Arms is the following:—

GRAND NORTHERN
RAILROAD
POST OFFICE

I cannot call to mind ever having seen an illustration of this Post Office vehicle, other than that in *The Literary World*, and various reproductions of it; therefore I am unable to state whether any other inscriptions have appeared on illustrations of this vehicle.

At least two meanings can be given to " Grand Northern Railroad Post Office ":—

(*a*) That the mails to the North were conveyed in this vehicle.

(*b*) That the coach ran on a railway called the Grand Northern Railroad.

It is already almost 102 years since the publication of the picture. Research by railway historians, including the undersigned, have cleared up most points in the history of our railways, but so far I cannot find any reference to a Grand Northern Railroad; indeed the word railroad is not used in the title of any British railway, but in the picture knowledge of these facts may be lost.

As to (*a*), the committee that inquired into the proposal to convey the mails by railway was called the Select Committee on *Railroads*. In the report the witnesses, some of whom were directors of railways, are shown as using the word *railroad* in their evidence. This may have been out of deference to the Post Office officials who used the word, but in the Act resulting from the report of the select committee (as well as all other railway Acts) the word " railway " is used. Again, why is " Grand " used instead of " Great "? The Grand Junction Railway was the only line with " Grand " as the first word in its title. The Post Office may have desired to emphasise the importance of the Post Office, and so placed " Grand Northern Railroad Post Office " on the vehicle, because at that period it would serve the districts north of London.

As to (*b*), Section 10 of 1 & 2 Vic. Cap. 98 "An Act for the Conveyance of the Mails by Railways," enacts " That on all carriages to be provided for the service of the post-office on any such railway there shall on the outside be painted the royal arms, in lieu of the name of the owner and of the number of the carriage, and of all other requisites, if any, prescribed by law in respect of carriages passing on any such railway."

The London & Birmingham Railway was thus precluded from having its own title on the Post Office carriage, although it was its property; but it may have desired to show that the vehicle did not belong to the Post Office. To safeguard the L. & B.R. from any suggestion that it was contravening the Act, it may be that the two words " Grand " and " Railroad " were used in the apocryphal title " Grand Northern Railroad."

The 10th Section of 1 & 2 Vic. Cap. 98 had not been repealed up to 1864, but may have been since. The owning railway paints its Post Office vehicles in its distinctive colour, which serves as an intimation of ownership. Over 20 years ago, I saw a Joint Midland and North Eastern Railways Travelling Post Office lettered " Midland & N.E. Joint Stock " in Derby red livery. Section 10 may have been repealed, or the builders may have been unaware of this section in the Act to provide for the Conveyance of the Mails by Railways, 1838.

Perhaps other readers of THE RAILWAY GAZETTE may be able to assist in the elucidation of what was meant by Grand Northern Railroad on the first Travelling Post Office, the property of the London & Birmingham Railway.

Yours faithfully,

G. A. SEKON

[The illustration from *The Literary World* of November 23, 1839, was reproduced in THE RAILWAY GAZETTE of April 1, 1938 (page 656), in connection with the centenary celebrations of the Travelling Post Office, and also at page 47 of our London & Birmingham Centenary Supplement entitled " The First Main-Line Railway " on September 16, 1938. We then pointed out that the mail exchange appliance was devised as early as May, 1838, by John Ramsay, an officer of the Missing Letter Branch, who was rewarded for his ingenuity by being appointed Post Office Inspector General. In February, 1839, the apparatus was reported to be " perfectly efficient," but between April 1 and May 11 there were eight failures in working, and Frederick Karstadt (who suggested the idea of the Travelling Post Office) headed his reports " Grand Northern Railway Post Office." This is the earliest use which we have been able to trace of the term Grand Northern, although Karstadt's reports adopted the word " railway " and not " railroad " as shown on the 1839 drawing. There can be no real doubt that the inscription was intended to refer to the postal service to the north—which used the lines of three or four different railway companies—and not to the title of one company.—ED., *R.G.*]

XUM

THE SCRAP HEAP

PAPER SHORTAGE IN OTHER TIMES

In north western China, about the third century, paper was so valuable that one who obtained it might exchange it for a house, cow, or wife.—*From "World's Press News."*

* * *

ECONOMISTS

Financial experts largely ruled this country between the two great wars. They made us bow down before the altar of gold. They swore with hands across their stony hearts that the nation would go bankrupt if it contemplated spending in years a sum no bigger than we now spend in weeks. Better, they cried, to keep the budget balanced than put unemployed men to work building roads and bridges and forests. Round about the year 1931 a man had only to mention that he was an economist and a reverent hush would descend on the lips of his audience. Now, he can scarcely show his face in any decent assembly.—*From the "Evening Standard."*

* * *

EXPERTS

Experts have their uses, but they are often persons who know so much about one thing that they know nothing about anything else.—*From the "Evening Standard."*

* * *

DANGER OR INCONVENIENCE?

Now that the black-out period is lengthening, I would like to offer a suggestion. On railways two kinds of precautions are taken. When the alert sounds all lights in trains are extinguished. In addition, whether there is any air raid or not, all blinds are drawn down, and even in the daylight hours the windows are surrounded with what may be called "widows' mourning." I suppose that the precautions are mainly intended to protect civilian life. Civilian life is doubtless more important than civilian convenience, but it is not immeasurably more important. A great inconvenience should surely outweigh a slight and remote danger, and from the point of view of national morale I am sure that danger is a less serious menace than inconvenience.

Most people are like the lady in the "Ingoldsby Legends," who "did not mind death, but she could not stand pinching." Small vexations are much more wearing to the will to victory than even grave dangers, and immensely more than slight ones. I urge, therefore, that we should retain the sensible precaution of darkening all trains when an air raid is signalled and give up the pulling down of blinds and putting our windows into "widows' mourning."—*Condensed from a letter by Lord Quickswood to "The Daily Telegraph."*

* * *

The darkness of railway carriages moves more passengers to write to the railways than any other sacrifice we make to victory. In the main, the letters to the railways are friendly letters written by people who know the difficulty and need for black-out and who do not suppose that the dim light is a symptom of dim management. Keeping full lights till the enemy aeroplane approaches would solve the whole difficulty, but clearly A.R.P. and not the railways must decide. Much as I should like to agree with Lord Quickswood, I have no hope of his solution being adopted. We must, I believe, continue to black-out windows and dim the lights of our railway carriages—much as we all dislike it—and the best comfort I can give my fellow sufferers is that the railways are fully conscious that their passengers want better light and are constantly seeking to improve.—*Reply by Sir Alan Anderson, Chairman of Railway Executive Committee and Controller of Railways, Ministry of War Transport.*

* * *

WHICH WAY UP?

Judging from the inscription on a crate of goods in a Liverpool station (writes a correspondent to the *Liverpool Post*), the old warning "This side up with care" is no longer considered sufficient. Instead, the packer of this particular consignment had carefully painted the inscription: "If you can read this, I am upside down." All the same, I rather wonder whether the packer's ingenuity has not defeated itself. The ordinary porter's inclination is to set up the package to correspond with the writing on it; to see the writing upside down makes the movement to up-end it almost instinctive.

A 0017
METROPOLITAN ELECTRIC TRAMS. AND METROPOLITAN RAILWAY.
THROUGH TICKET.
Change at Willesden Green.
Edgware 3D
Tramway Depot 2D
Old Welsh Harp
Available on day of issue only.
Willesden Green to 3rd Class only 3
Kilburn West Hampstead
Finchley Road 1½D
Swiss Cottage Marlboro Road 2D
St. John's Wood Rd. Baker Street 3D

003
METROPOLITAN RAILWAY & METROPOLITAN ELECTRIC TRAMWAYS.
Available on day of issue only.
SEE CONDITIONS ON BACK.
Kilburn & Brondesbury
TO
OLD WELSH HARP
CHANGE AT WILLESDEN GREEN
3rd CLASS on METROPOLITAN ELY.
SINGLE FARE 2d.
To be given up on Tramcar for Exchange Ticket to Old Welsh Harp.
003

The through bookings between Metropolitan Railway stations and the Metropolitan Electric Tramways, in connection with which were issued these tickets from the collection of Mr. H. W. Bardsley, were discontinued from February 16, 1908

* * *

THE TRAM(MELLED) PATRIOT

Trouble in Belgium this week is a reminder of an odd story which came from Brussels recently. An "Occupying German" happened to look over the shoulder of another passenger in a Brussels tram. The Belgian was reading, and had a bookmark displaying the following sentiment in large letters:—

To wait, does not mean to renounce. To be silent, does not mean approval.

Being outnumbered by decidedly hostile Belgian passengers, the Nazi said nothing at the moment, but passed the matter on to the German-controlled *Brusseler Zeitung*, which warned its readers against such unfriendly activities. Nevertheless, no friendliness has been forthcoming for the invaders.—*From "The Glasgow Herald."*

* * *

Referring to the ex-Shah of Iran, a reader draws attention to the following extract taken from *The Scotsman* of January 20, 1937, underneath a Paris date line:—

Abolghassem Frouhar Nadjm, Minister of the Shah of Iran in Paris, left here by the 6.15 train last night as a sign of his master's displeasure at a pun in the gossip column of a French weekly. The Shah has also provisionally cancelled Iranian participation in the Paris 1937 Exhibition.

The position appears to have been that an article in a French monthly did not, in the Shah's opinion, do justice to his reforms in Iran. A second article was contributed by a French Minister which made up for the omissions in the first. A gossip writer, commenting on the incident, quoted the old proverb, "Il n'y avait pas de quoi fouetter un chat" ("it is not worth all that fuss"). Only he spelled the last word in the proverb "Shah."—*From "The Scotsman."*

OVERSEAS RAILWAY AFFAIRS

(From our special correspondents)

ARGENTINA

Grain Elevator Construction

Work on the construction of a chain of national grain elevators, which has been suspended for some time, is about to be resumed, and a Decree providing for the expenditure of over 100,000,000 pesos on such work during the next three years has been submitted to the Argentine Government by the Ministry of Agriculture. The financial part of the scheme is stated to have been approved by the Ministry of Finance, and the technical details have been worked out by the Ministry of Agriculture and the Director of National Grain Elevator Construction. It is stated that of the total sum mentioned, not more than 25,000,000 pesos will be spent during the current year, and this will be devoted exclusively to work on up-country elevators. The original Government scheme provided for the construction of six terminal elevators at the ports of Buenos Aires, Rosario (2 installations), Villa Constitución, Bahia Blanca, and Quequen, with a combined storage capacity of over 430,000 tons, in addition to about 300 up-country installations. Very few of the latter have so far been put in hand, but work is well advanced on several of the terminal elevators, that at Buenos Aires being almost completed.

MEXICO

The National Railways' Position

On reliable authority it is reported that the Manager of the National Railways recently made an outspoken statement before the Senate. He pointed out that no fewer than 300 of the 1,000 engines on his line had been in service for over 40 years, also that 100 of them were useless and 200 required repairs. Of the 8,000 wagons the company owned in 1913 only 5,000 were now serviceable, though the tonnage offering had doubled. Consequently, 50 engines and 3,000 wagons, and also 200 tank wagons and 80 coaching vehicles were urgently required, but would cost 85,000,000 pesos.

Moreover, he continued, 3,300 miles of relaying would have to be undertaken in the next five years at a cost of 80,000,000 pesos. Other important maintenance works had also been postponed for years, and the company was 19,500,000 pesos in arrears on account of overdue maintenance works generally. He went on to discuss the difficulties and obligations facing the administration. The allocation for wages monthly had been overspent by 1,500,000 pesos, and this deficit had to be made good at the expense of track maintenance and the Depreciation Fund. He warned his hearers that the lack of replacement of materials would cause disaster in a few more months and seriously affect the national economy.

After severely criticising the existing scales of wages, premature pensioning of staff—causing the employment of redundant personnel—and stupid regulations on unbusinesslike lines, the Manager stated that complete rehabilitation at a cost of 200,000,000 pesos was essential as a result of 25 years' incompetence and immorality. This sum only the Government could guarantee, but it was interested in the efficiency of the railway, which must in future be run on strictly commercial lines.

SPAIN

Nationalisation

The Madrid *Boletin Oficial* of July 26 publishes the text of a lengthy Decree detailing rules and directions for the organisation and administration of the new National system, Red Nacional de los Ferrocarriles de Españoles (National System of Spanish Railways), under the Law of January 24, 1941. (The Law nationalising the Spanish broad-gauge railways was fully described in THE RAILWAY GAZETTE of March 28 last, at page 360.) The principal points in the Decree are as follow : the National System is to be organised and directed by a council of administration, which will approve the rules and regulations for traffic working, distribution and conditions of service of staff, standardisation of rolling stock, etc. In due course, the council will propose to the Government the incorporation into the system of other lines. The General Manager of the railways is appointed by the Government, on the nomination of the Minister of Public Works, and the staff will be selected and distributed in such a way as to produce the most efficient results. Railway technical schools are to be established with the same end in view. The National Railway System will continue to pay the pensions and widows' and orphans' allowances conceded prior to the date of the nationalisation.

CEYLON

The Financial Position of the Railway

According to the Board of Ministers' report on the annual Appropriation Bill, the estimated earnings of the Government Railway in 1941-42 are placed at Rs. 17,000,000—the same figure as in the current year's estimates—but the loss in 1941-42 is estimated at Rs. 6,970,012 against Rs. 3,403,925 in the 1940-41 budget. Actual working losses have fluctuated between Rs. 2,416,219 in 1936-37, Rs. 4,580,394 in 1938-39, and Rs. 4,049,904 in 1939-40. The expected increase in working loss is put down to the abnormal rise in the cost of coal, permanent way materials, and stores due to the war.

It is unfortunate that unforeseen war-time considerations have defeated the efforts of the administration to curtail expenditure and, in fact, are having the opposite effect, but the real secret of the whole trouble seems to be the long and avoidable delay and confusion that has been allowed to occur in bringing road transport services under proper control and in allowing the element of ruinous competition to continue and increase. This problem is now complicated by new and abnormal factors and is still as far from solution as ever. The inevitable question being asked is: "is the present attitude of the Government dangerously like defeatism?" The taxpayer, who is bearing the heavy burden of the increasing railway deficits, would like to know.

BRAZIL

Mogyana Railway 1940 Results

Receipts in 1940 were 62,466 contos, and with expenses at 48,395 contos a net balance of 14,071 contos was obtained. The following were the principal traffic statistics for the year :—

	1939	1940
Passengers carried	2,825,554	2,720,996
Passenger receipts (contos)	12,257	12,279
Luggage and parcels (tons) ..	45,353	45,582
Coffee (tons)	139,931	120,635
Other goods (tons)	973,950	987,030
Animals carried	125,001	117,192

A decrease of nearly 2,000 contos in coffee traffic receipts was more than balanced by an increase of 2,479 contos on other goods, but despite this and the total net balance of 14,071 contos, it was still not possible to pay any interest on capital as 10,000 contos were required to meet interest charges on the external debt. The consolidation and nationalisation of this debt, referred to in THE RAILWAY GAZETTE of January 10, 1941, should alleviate the financial situation of the railway considerably, and bring it back to a state where a just return on capital invested may be forthcoming.

WESTERN AUSTRALIA

East-West Commonwealth Road

The Commonwealth Government has announced that the road between Western Australia and South Australia is to be reconditioned at an estimated cost of £250,000 and camp sites for the men to be employed are being prepared. The road runs parallel and in direct competition with the Government-owned railways of South Australia, Western Australia, and the Commonwealth, and while, no doubt, it will please car owners who in the past have been deterred from taking the overland route by the bad condition of long stretches of the road, it may cause a loss of revenue to the railways. At the same time under existing conditions, with the rail service heavily loaded and sea transport between eastern and western Australia restricted and hazardous, the reassurance of an alternative to the existing transport link will be useful in the event of a national emergency and a possible dislocation of present rail or sea facilities. The incidence of petrol rationing will doubtless discourage any considerable use of the road by tourists during the war, and for the present, therefore, it will be regarded largely as an insurance against possible need.

Basic Wage Increases

On April 28, 1941, the State Arbitration Court declared a new basic wage, thereby raising the rate from £4 6s. 11d. to £4 8s. a week in the Metropolitan area; from £4 7s. 8d. to £4 9s. 3d. in the agricultural areas, and from £5 2s. 1d. to £5 3s. 6d. in the Goldfields and the rest of the State. This will add no less than £30,000 to the Government Railways wages bill.

XUM

INTERMEDIATE SIGNALLING ON THE SWISS FEDERAL RAILWAYS

Signalling between Lausanne and Renens controlled by track circuit on one track, laid with wooden sleepers, but by axle-counters on the other, on steel sleepers

FOR some years past the Swiss Federal Railways have been extending the use of intermediate signalling with the object of eliminating block posts. Owing to the fact that steel sleepers are extensively used on some routes, an alternative to the track circuit has been required, and as long ago as 1920 intermediate advance section signalling was introduced in the Hauenstein (Base*) tunnel, between Basle and Olten, using an axle-counting apparatus—designed by R. Zaugg, one of the railway staff—controlled by a direct-acting wheel-operated treadle. Similar apparatus was later installed in the Simplon and other tunnels, but mechanical treadles are no longer considered satisfactory for speeds over 90 km.p.h. (56 m.p.h.). For higher speeds a magneto-inductive form of treadle—in reality an impulse generator—is now used, working on the principles described in our article on signalling in Alsace-Lorraine.† Although axle-counting is not yet considered to give exactly the same degree of security as track circuit—which is always used where wooden sleepers exist—the Swiss Federal Railways are satisfied that it can be made practically equivalent if certain special precautions are observed. Hitherto, the usual practice, when installing intermediate signalling, has been to use an advance section on one track and an intermediate (outer) home section on the other, the remaining sections on each track being controlled by the ordinary block apparatus. In the recent work between Lausanne and Renens, however, the intermediate signals are normally purely automatic. They replace a block post known as Malley.

Traffic between Lausanne and Renens is fairly heavy at certain seasons, there being a train every 7 min. when holiday traffic is being handled. A headway of 2½ min. is possible with the new signalling. The eastbound Renens—Lausanne track is on wooden sleepers, and is divided into two sections, 1,887 and 1,684 m. (2,064 and 1,842 yd.) long, respectively, equipped with single rail d.c. track circuits, the traction current being a.c. The home and distant signals for Lausanne (No. 1 box) are mechanical and fitted with reversers, but the intermediate signals and the starting signals at Renens (No. 2 box) are colour-light. On the westbound track, Lausanne—Renens, all the signals concerned are colour-light. The through working is controlled by inductive type treadles at three points, but shunt forward movements to the main line at Lausanne are covered by a directional mechanical treadle of the leaf spring pattern. Special key locking arrangements have been provided to enable the intermediate signals to be held in the clear position, and the whole line between the two stations worked manually as one section in the event of a serious defect developing in the axle-counting mechanism, but there is no equivalent arrangement for the other track. Illuminated diagrams are provided in both signal boxes, and the condition of the sections is also repeated in each station supervisor's office. The apparatus has now been in use for about 12 months with satisfactory results. Monsieur C. Desponds, Signal Engineer, No. 1 Division, at Lausanne, writing in the *Bulletin of the Swiss Federal Railways* for June, 1941, states that there were at first a number of failures to count correctly, but that a considerable improvement soon set in. On the track-circuited sections of the line the working of the apparatus has been satisfactory from the time it was brought into use.

MECHANISED RELAYING ON THE MISSOURI PACIFIC LINES

Relaying on the Missouri Pacific Lines, instead of being done manually by gangs of about 25 men as hitherto, is now carried out by a special mechanised gang of about 100 men and a battery of a dozen power-driven machines. The change was made early in May, and in future all relaying on the Southern and Western Districts will be done by this same gang. Within three weeks the men had shaken down to their jobs as a well co-ordinated team, and their rate of relaying was closely approaching a mile a day.

The new method not only increases efficiency, but also insures safer working for the men and for train movements; also a greater degree of precision and uniformity is secured.

Mr. A. A. Miller, Chief Engineer, Maintenance of Way, describes the sequence of operations in a normal job of relaying, or, as it might be more accurately called, track reconditioning, for the sleepers are not renewed as they are in what is described as relaying in Britain. The first machine to come along is a mechanical spike-puller, which can be lifted from the track, as it weighs under half-a-ton, or can be towed behind a motor trolley. It is driven by a petrol engine and has a pair of mechanical arms each with jaws that grip a spike and pull it directly upwards, without damaging it. On an average 20 to 25 spikes can be removed a minute.

Following the spike-puller a squad comes along slewing out the old rail, and then another that plugs the spike holes in the sleepers. The next procedure is the adzing by a machine, on either straights or curves. Its work, by insuring that the adzing is level and in the same plane, eliminates rocking bearing plates and their distortion due to hollow bearing surfaces, resulting in torsional strains in the rails and joints. The adzed surface is next sprayed with creosote and the bearing plate is laid on it. Then follows a 5-ton petrol-driven locomotive crane, capable of revolving through 360 deg., of running under its own power at speeds up to 25 m.p.h., and of running off and clear of the track within 2 min., by means of the special traversing equipment with which it is provided. This consists of a set of rails that are laid at right angles to the track on a level surface, and a special set of transverse wheels to run on them. The crane is fitted with a 33-ft. jib, yet when this is at right angles to the track, the rear end does not overhang far enough to foul an adjacent track. Extreme mobility and handiness is, therefore, achieved, and the crane can be used for many purposes. Working either from the track or loaded on a flat truck it can be used for unloading new rails or loading old ones, for picking up and placing clear of the track other machines, or for its most usual job, namely, picking up rails from the ground and lowering them into final position with the maximum of speed, efficiency, and safety.

After the crane has placed the rails in position and the fishplates and bolts have been fitted, along comes a power wrench, with a 4-h.p. petrol engine and weighing about 5 cwt. It is capable of tightening up nuts at the rate of 72 r.p.m., and an adjustable overload release insures uniform tightness for all nuts. This machine is also used for unscrewing nuts.

A power-driven bonding drill finally drills the holes in the rails for track-circuit bonding. For cut rails a 3-h.p. power drill also forms part of the gang's equipment. The remainder of the gang not yet employed comes along behind the machines to space the sleepers, pack and box, fettle, and generally complete the relaying.

* Base tunnel is so named to distinguish it from the old Hauenstein tunnel: the word base indicates that the tunnel is driven through the base of the mountain

† See THE RAILWAY GAZETTE, for May 31, 1940, page 765

ELECTRIC TRACTION SECTION

New Mixed Traffic Electric Locomotive, L.N.E.R.

This locomotive designed for general service on the Manchester—Sheffield—Wath lines, has been undergoing tests between Manchester and Altrincham

BY September, 1939, the work of converting the Manchester—Sheffield—Wath lines of the London & North Eastern Railway to electric operation on the 1,500-volt direct-current system, with overhead transmission, was well in hand. Seventy mixed traffic electric locomotives were being built at the company's works at Doncaster, but on the outbreak of war it was decided to suspend all further work on these, with the exception of the first locomotive, No. 6701, the construction of which was in such an advanced state that it was considered preferable to complete it. This decision also had the advantage of enabling tests to be carried out on one locomotive to check the design before the construction of the remaining 69 could be resumed.

Wide Range of Traffic

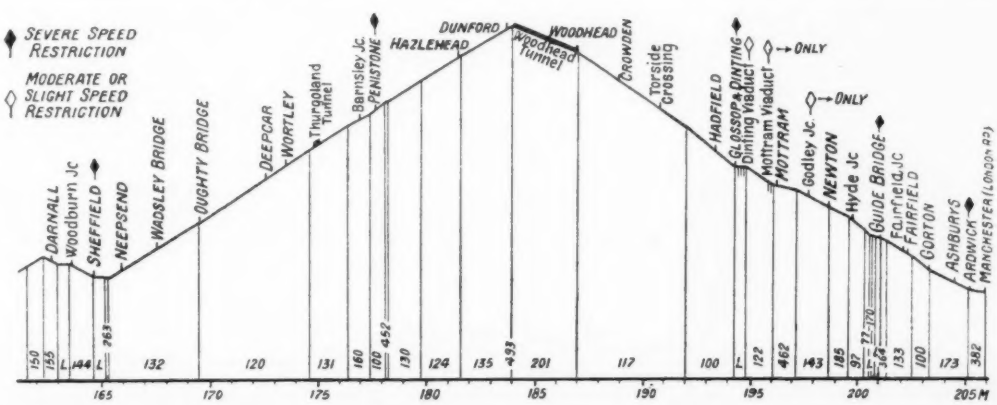
A wide range of traffic moves over the Manchester—Sheffield line, varying from express passenger and express freight trains, weighing about 250 tons and 500 tons, respectively, to heavy unbraked freight trains, from 550 tons to nearly 1,100 tons. The route is steeply inclined from each end to a summit at Woodhead tunnel, under the Pennines, as shown on the accompanying profile. The lines to be electrified are indicated on the map, and have a total route length of 75 miles. Altogether nearly 300 track miles are involved in the electrification scheme. In 1936, when the details of the scheme were approved by the directors of the L.N.E.R., the steam locomotives on the 75 miles of railway to be electrified covered an annual mileage of 3,955,723, and it was then estimated that under electric traction that figure would be approximately 4,010,000, of which roughly 2,550,000 would be freight engine miles, 950,000 passenger engine miles, and 500,000 shunting engine miles. The total annual trailing ton miles to be worked electrically, including shunting, was estimated at 1,300,000,000, which represents a traffic density of 17,500,000 trailing ton miles per route mile a year. Under electric traction it is hoped to accelerate the average start-to-stop speeds of trains over the Manchester—Sheffield route by 25 to 40 per cent.

The more efficient operation of traffic through the double Woodhead tunnel was one of the strongest incentives to electrification. These tunnels each convey a single line of railway, one used in the up direction and the other in the down, and they are 3 miles long. They are situated between Woodhead and Dunford Bridge and, owing to the higher speed at which trains will pass through them, the line capacity will be greatly increased. Up to the present the capacity of the tunnel in the up direction has been approximately four trains of all descriptions an hour (partly due to the length and up grade and partly to the smoke nuisance) and it is this fact which has determined the traffic density over the whole line between Sheffield and Manchester. Under electrification it is considered that it will be possible to increase the capacity of this tunnel by 25 per cent., and a further benefit will ensue by reason of the longer life of the rails in the tunnel. Owing to the present atmospheric conditions, the life of the standard 95-lb. rails is limited to 3-3¾ years as compared with a normal life in the open of 15-17 years. The electrification of the tunnels will materially reduce the rate of corrosion, but owing to the wet nature of the various strata through which the tunnels are pierced this will not be eliminated. However, it is estimated that the rails will last from 5 to 6 years, or 33 to 50 per cent. longer than under existing conditions.

Some of the heaviest locomotive work on the L.N.E.R. is at present performed over the Manchester—Sheffield line. Coal trains from Wath concentration yard with a trailing weight in excess of 1,000 tons are worked at present up the 1 in 40 gradient approaching West Silkstone junction by four steam locomotives, two in front and two behind. Under electrification the banking of these trains will continue. A trailing load of 250 tons is normal for passenger trains, but during the summer season and at holiday times this weight is increased to approximately 350 tons.

Considerations Affecting Design

In considering the design of a standard mixed traffic locomotive to be capable of handling all classes of trains, it was obvious that the simplest and cheapest form would be the articulated double bogie, or Bo + Bo type, but experience in other parts of the world has shown that it is not easy to obtain smooth running with this wheel arrangement at speeds approaching and over 60 m.p.h. By the adoption of a special springing arrangement, and by installing motors with



Gradient profile of Manchester—Sheffield line, L.N.E.R.

a high degree of field control, the L.N.E.R. has produced a locomotive which should have a very wide range of usefulness.

As the Manchester—Altrincham line is equipped with overhead transmission at 1,500 volts direct current, it has been possible to carry out trial running on this line, and the results so far obtained have shown that the locomotive will meet the traffic requirements mentioned above. Locomotive No. 6701 has four force-ventilated, nose-suspended motors giving a total horsepower of 1,860 at the one hour rating, and is capable of hauling an express passenger train at 65 m.p.h. on the level, and an express freight train weighing 500 tons at 40 m.p.h. up a 1 in 125 grade, or a 700-ton freight train at 26 m.p.h. up the same gradient.

There is a roomy driver's compartment at each end of the locomotive, and the general layout provides ample space for attending to the control and auxiliary equipment which is located in various compartments in the main portion of the body. The driver is comfortably situated, with the various control levers easily accessible, and has an unobstructed view from the front window of the cab, which is provided with an automatic window wiper.

Special Bogie Springing

The leading dimensions of the new locomotive, which was described in the *Electric Traction Section* of our March 7 issue (page 248), are shown on the diagram. The mechanical parts comprise a steel body and underframe, containing the electrical and auxiliary equipment, supported on two articulated 4-wheel bogies, which carry the drawbar and buffer gear. In addition to being articulated in the general sense of allowing the two bogies to rise and fall relative to one another and to allow for the negotiation of simple curves, one unit of the coupling has been given a certain amount of spring-controlled side translation to compensate for the relative movements on a reverse curve.

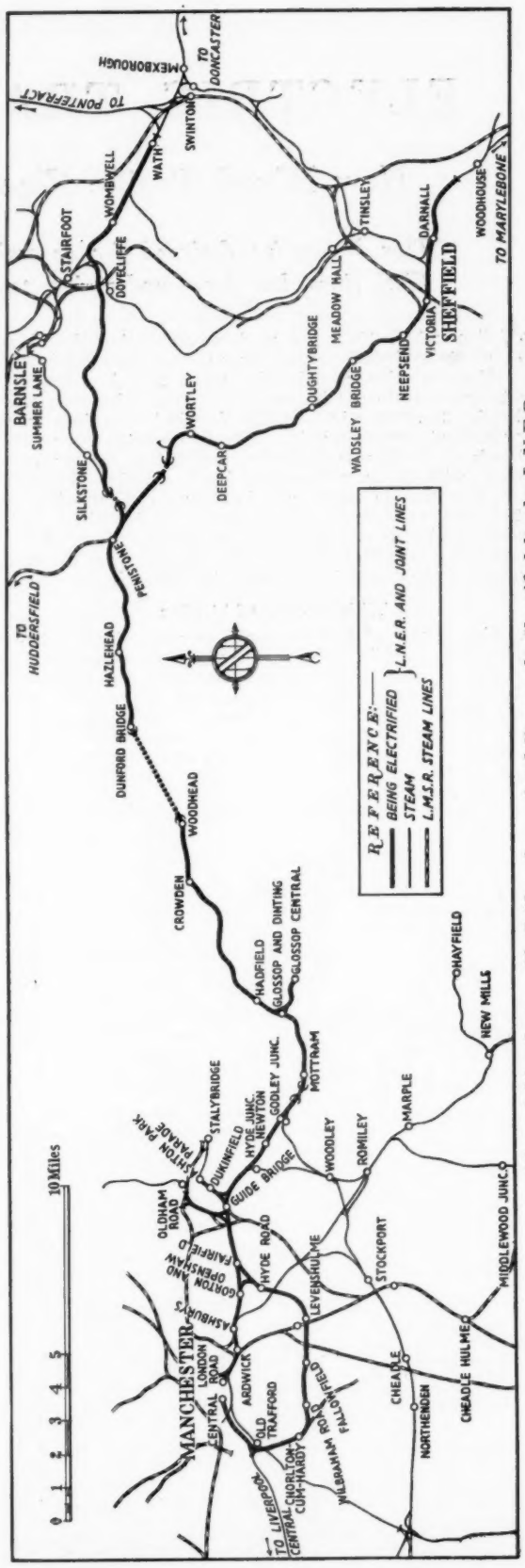
The bogie centre stay is a steel casting, but as it does not take the superstructure weight at its centre it is of specially light construction. The weight on the axleboxes is taken by one independent laminated spring over each axlebox, but in addition to these the superstructure is carried on four helical springs on each bogie in brackets fixed on the outside of the bogie frames.

The helical springs each fit into an inverted cylinder, the upper portion of which is concave as the segment of a sphere. In between this and the bearing faces of the superstructure is interposed a washer having a convex surface equal in radius to the sphere. This gives something of an articulating action between the bogies and superstructure to compensate for their relative angular movements. The inverted cylinders in their turn fit into the above-mentioned brackets on the bogie frames, and are so arranged that the helical springs can be renewed at the running sheds without any lifting of the engine by cranes. The complete superstructure is therefore provided with eight points of spring support independent of the main laminated springs, and it is found that this arrangement gives good riding qualities.

A certain amount of lateral side movement has also been allowed for between the superstructure and the two bogies. The maximum is ½ in. on either side of the centre, and it is controlled by means of helical springs fitted within the main centre casting of each bogie in a similar manner to the side control springs of the conventional spring controlled locomotive bogie. One centre casting is also provided with longitudinal clearance to allow for the alteration of the bogie centre distance on curves.

Constructional and Electrical Details

The base of the superstructure which forms the foundation for the machinery and control equipment assembled therein is formed of two longitudinal main frames ¾ in. thick and 1 ft. 6 in. deep at the centre. It is firmly braced by welded and riveted stays, one at the centre of the frame and one over each bogie centre. These stays carry longitudinal rolled sections from end to end of the locomotive to which the footplate is secured and which carry the machinery supports. The stays above the bogie centres also have rubbing blocks transferring the weight of the superstructure on to the helical bearing springs previously mentioned.



Map of Manchester—Sheffield and associated lines to be electrified by the L.N.E.R.

Test train at Warwick Road station headed by electric locomotive No. 6701, L.N.E.R.

The basis of the cab and body construction is a series of channel iron carlines forming a frame on to which the roof and outer plates are secured. This framework also carries the weight of the two pantographs and their necessary operating gear. In order to keep the weight within the allowable limits, the outer body plates are $\frac{1}{8}$ in. thick, and, to prevent any drumming of this thin plating, a slight curvature has been given to the carlines and plating. This has also enhanced the appearance of the locomotive, and has added a certain amount of extra stiffness.

The locomotive itself is fitted with the Westinghouse brake, but it also has a motor-driven exhauster for operating the vacuum brakes on passenger and goods trains. A motor-driven compressor is, therefore, provided, and the compressed air is also used for operating the pantograph current collector and the electrical control. In each driver's cab there is a driver's brake valve so designed that the air brake is applied to the locomotive and the vacuum brake to the train simultaneously.

Current is collected from the 1,500-volt overhead line by either of two pantograph collectors. The traction motors are provided with forced-ventilation and are insulated for 1,500 volts, but are connected permanently in two pairs with 750 volts across the brushes of each motor. The motors are operated in series and parallel combination, and four stages of field weakening are provided. To obtain steady control of the heavy trains on the down gradients from the Woodhead tunnel at the top of the Pennines the motors can also be connected for regenerative braking by separately exciting the fields from the motor-generator mentioned below, and so return energy to the overhead line.

The remote control of the electro-pneumatic contactors and the drum-type switches for reversing, etc., is effected by 50-volt circuits from the master controller, and the low

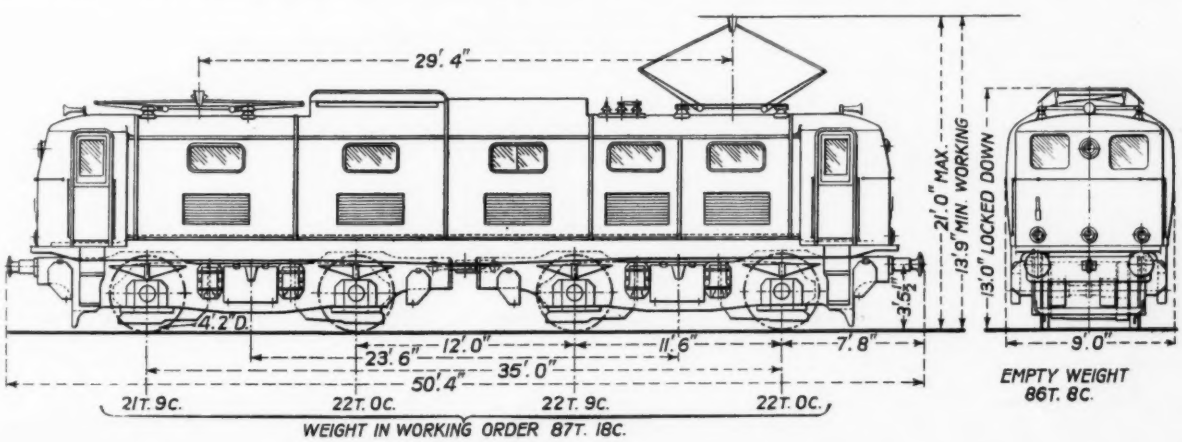


Diagram of the new L.N.E.R. mixed-traffic electric locomotive

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Left: Driver's controls in the new L.N.E.R. electric locomotive. Right: Mr. George Mills (Divisional General Manager), L.N.E.R., talking to the driver, Mr. John Priestly, at the end of the trial run. Mr. H. W. H. Richards (Chief Electrical Engineer, L.N.E.R.), Mr. C. E. Fairburn (Deputy Chief Mechanical Engineer & Electrical Engineer, L.M.S.R.), and Mr. P. S. Turner (Director of Metropolitan Vickers) are facing the camera

tension supply for this purpose is obtained from a 5-kW motor-generator blower set. A second motor-generator set provides current for the excitation of the main motor fields during regeneration. The blowers of these two sets, which run continuously, give a combined output of 9,000 cu. ft. per min. for ventilating the main motors.

In the event of the 5-kW motor-generator failing there is a battery of 33 nickel-iron cells having a rating of 400 amp. hr., which would be able to provide current for lighting and control; this battery is normally charged by the generator. The usual protective interlocking prevents access to the resistance and high tension compartments when either pantograph is in the raised position.

Since passenger trains from all parts of the line will work over the electrified section, steam heating is essential, and tests were made to ascertain the amount of steam required per coach. As a result it was decided that a boiler producing 750 lb. of steam per hr. at a pressure of 65 lb. per sq. in. would be able to give all the steam necessary for the longest trains operated between Manchester and Sheffield. An electric boiler working at 1,500 volts d.c. and rated at 300 kW with automatic control has therefore been provided.

When a heavy train is being started the large drawbar pull causes a transference of weight from the leading to the rear axle of each bogie, and the resulting loss of adhesion might cause the leading wheels to slip if the tractive effort were not reduced on these two axles. Control is effected by the driver closing a small low tension switch mounted near the master controller which by remote control weakens the field of the leading motor on each bogie and so reduces its tractive effort. At the same time a red indicator lamp lights up to remind the driver to open the weight transference control switch and restore conditions to normal as soon as need for the extremely high starting tractive effort ceases. Air-operated sanding is provided for on both sides of all wheels.

Speed curve on test run with 273-ton load

Performance on Test Runs

During recent test runs on the Manchester, South Junction & Altrincham Railway, the new locomotive, hauling a train of seven corridor coaches, weighing 250 tons, attained a speed of 64 m.p.h. in the outer direction between Warwick Road and Altrincham, a distance of only 5½ miles, and of 60 m.p.h. on the return journey, in spite of an intermediate signal stop. On Sunday, October 5, further trial runs on this section of line took place, with an unbraked goods train of 45 loaded coal wagons and two 20-ton goods brake vans, making a total trailing load of 700 tons. A speed of 36 m.p.h. was reached, and braking tests showed that this train could be pulled up smoothly from 30 m.p.h. to stop within a distance of 600 yd. in approximately 80 seconds. The curve reproduced opposite, taken from the Flaman speed recorder, shows the performance of the locomotive on a 5·5-mile test run when hauling a 273-ton trailing load. The start-to-stop time was 7 min. 45 sec., giving an average of 42·5 m.p.h., and the maximum speed was 63 m.p.h. It will be noticed that 60 m.p.h. was attained in 3 min. On Friday, October 3, a party of railway officers and representatives of the press took part in one of these test runs, when the riding of the locomotive was found to be remarkably steady at all speeds, which is a tribute to the special springing devices described above.

As the Divisional General Manager, Mr. George Mills, said in a brief speech afterwards, although work on the electrification had been suspended by the war, the L.N.E.R. had decided to complete one of the 70 locomotives ordered, so that, when eventually the remainder were built they might incorporate any modifications dictated by the results of the

tests now being conducted with No. 6701. To judge by the behaviour of the locomotive so far, however, there would appear to be only small scope for improvement, the efforts of the late Sir Nigel Gresley and his successors evidently having been successful in overcoming most of the inherent drawbacks of the double-bogie design for such widely varying purposes as are required for the particular service.

Besides Mr. Mills, the L.N.E.R. was represented by Messrs. H. W. H. Richards (Chief Electrical Engineer), H. H. Swift (Assistant Chief Electrical Engineer), A. H. Peppercorn (Assistant Chief Mechanical Engineer), G. A. Musgrave (Locomotive Running Superintendent (Western Section)), George Dow (Information Agent), C. B. Kirk (District Locomotive Superintendent, Gorton), J. A. Jenkinson (District Superintendent, Manchester), F. W. Wheddon (District Passenger Manager, Manchester), H. S. Owen (District Goods Manager, Manchester), A. G. Hopkins (Traction Assistant to Chief Electrical Engineer), and T. A. Street (Technical Assistant to C.E.E.). Messrs. C. E. Fairburn (Deputy Chief Mechanical Engineer & Electrical Engineer), K. C. Marriar (District Engineer, Manchester), A. Taylor (Divisional Electrical Engineer), and G. M. Morris (Assistant to Manchester Area Electrical Engineer) represented the L.M.S.R., and Mr. P. S. Turner (Director) was present on behalf of Metropolitan Vickers, who supplied the electrical equipment of the new locomotive.

Marking Wires and Cables

A simple and ready means of identifying individual conductors

IN many of the electrical installations used in railway signalling, in marshalling yards, running sheds, and other premises, to say nothing of the special features of electric traction, numerous cases arise in which it is common practice to use some means of identifying individual conductors. This is almost essential where multi-core cables are employed, and it is also highly advantageous in many more circumstances than is ordinary practice from the points of view of facilitating maintenance, increasing safety, and avoiding mistakes.

The marking sleeves in solution, ready to be slipped over a cable

A Viskring being placed on the cable. The sleeve contracts as it dries

The use of distinctive colours for the braidings of wires, and of combinations of colours in some pre-arranged code, is one way in which identification can be secured. But this means the employment of specially manufactured cable with the distinctive colours throughout the lengths, and unless utilised consistently throughout a system can lead to worse confusion. Small tie-on labels have been used, but they are liable to become detached, they get dirty, and make an untidy arrangement where a number of cables join up, as in a junction box. The more modern method is to thread the end of each wire through a marking sleeve.

For this purpose the Viscose Development Co. Ltd. markets a material which is permanent, and does not require the use of a tool for its application. Identification sleeves of this kind are manufactured under the trade name of Viskrings. These are employed wet, and have the property of contracting about 25 per cent. as they dry. Thus in the wet state a sleeve of the relative size is large enough to be readily slipped over the end of a wire by the unaided use of the fingers, and yet within a short time it will dry sufficiently to grip the cable securely. The material is impervious to the effects of oil and petrol, and does not add appreciably to the diameter of the wire. A sleeve threaded over a pair of twisted wires takes the shape of the combination, and there are many other uses to which Viskrings can be applied.

For wire and cable marking, Viskrings are supplied in quantities immersed in a special solution contained in glass bottles. The solution is innocuous, and the sleeves are taken out one at a time by the fingers as required; they are, in the wet state, larger in diameter than the wire, and the easy threading of them, without the need for any stretching tool, is one of the features of their use which is most appreciated in practice. They are obtainable in a wide range of standard sizes, or in special sizes to order, and can be marked indelibly with any required combination of letters or numbers, according to the needs of a job.

Usually the sleeves themselves are white but they can be supplied in any specified colour; thus it might become a convention for white to be reserved for d.c. circuits, and yellow for alternating currents. Sleeves have also been applied to the outside of glass-cased fuses, in place of the usual internal piece of paper to denote the rating of the fuses.

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THE APPROACH TO WEYMOUTH QUAY

Photo] [*Timothy H. Cobb*

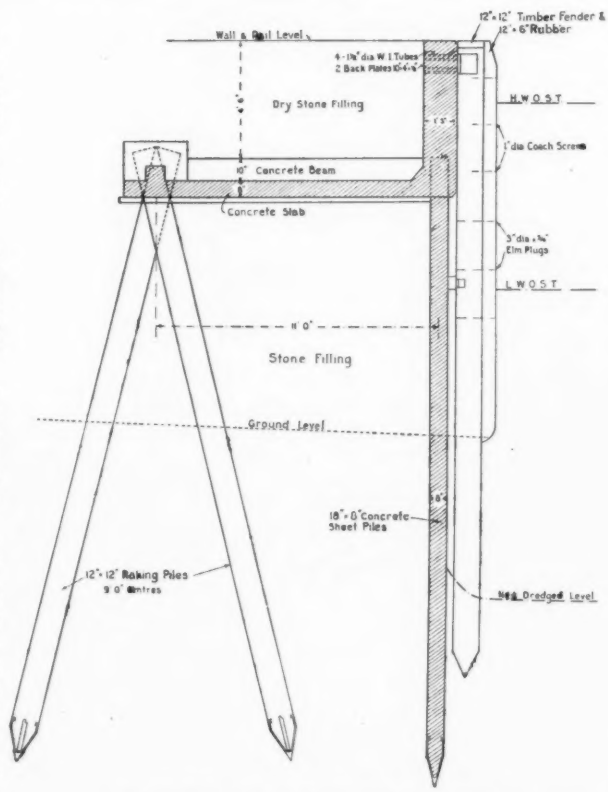
Pre-war up Channel Islands boat express leaving Weymouth Quay, G.W.R. Outside cylinder 0-6-0 saddle tank locomotive

BEFORE the outbreak of the present war the G.W.R. Channel Islands boat expresses reached Weymouth quay over a tramroad traversing the public streets and quayside, connecting Weymouth station with the harbour owned by Weymouth Corporation. This tramway is part of the undertaking owned by the Weymouth & Portland Railway Company and was constructed by it under the provisions of the Weymouth & Portland Railway Act of 1862, and by arrangement with the Corporation of Weymouth & Melcombe Regis. It is described in Section 16 of the Act as under:—

"3. A Railway or Tramway to commence by a junction with the Weymouth & Portland Railway and the Great Western Railway at or near the junction of the Weymouth & Portland Railway with the said Great Western Railway at or near a point about 170 yards North of the Great Western Goods Shed, and to terminate at or near the Toll House on the Pile Pier in the said Parish of Melcombe Regis."

Under Section 36, the Weymouth & Portland Railway Company was obliged to complete the authorised works within four years of the passing of the Act, and the opening for traffic actually took place on October 16, 1865, but it was not until July 1, 1889, that the tramroad was first used by passengers. The line was originally laid with mixed gauge tracks, as was the rest of the Weymouth & Portland Railway, but the use of the broad gauge was discontinued on June 18, 1874, some years before passenger traffic began. In accordance with the heads of agreement scheduled to the Act, the line is leased to the Great Western and London & South Western (now Southern) Railway Companies, which are jointly responsible for its management. By arrangement, the Weymouth & Portland line is maintained by the Great Western Railway and the train service provided by the Southern Railway, although the G.W.R. works the traffic over the tramroad as an extension of its own services.

The line was 1 m. 8 ch. long until 1938 when the G.W.R. took in hand an improvement scheme to facilitate the working of passenger traffic to and from Weymouth quay, and the length of the tramroad was slightly increased as a



Typical section of piling and quay wall

result of the work then carried out. For many years considerable delay had been occasioned to passenger stock working over the tramroad as, owing to the sharp curvature of the line, it had been necessary to detach the couplings of vehicles and substitute special long couplings so as to avoid risk of damage to undercarriages of rolling stock. The work carried out in 1938 (which was briefly described in THE RAILWAY GAZETTE for November 4 of that year, page 782) provided for flattening the curve for a distance of about 1,100 ft. from Lower St. Albans Street, passing under the town bridge, to St. Mary's Street. The reclamation of a portion of the harbour to a maximum width of 70 ft. was involved, together with the construction of a new quay wall of reinforced concrete sheet piling with a concrete capping. Behind this, filling was tipped to the extent of some 22,000 cu. yd. As shown in the accompanying drawing, the sheet piles of the quay wall were anchored back to two raking piles by means of a flat floor slab.

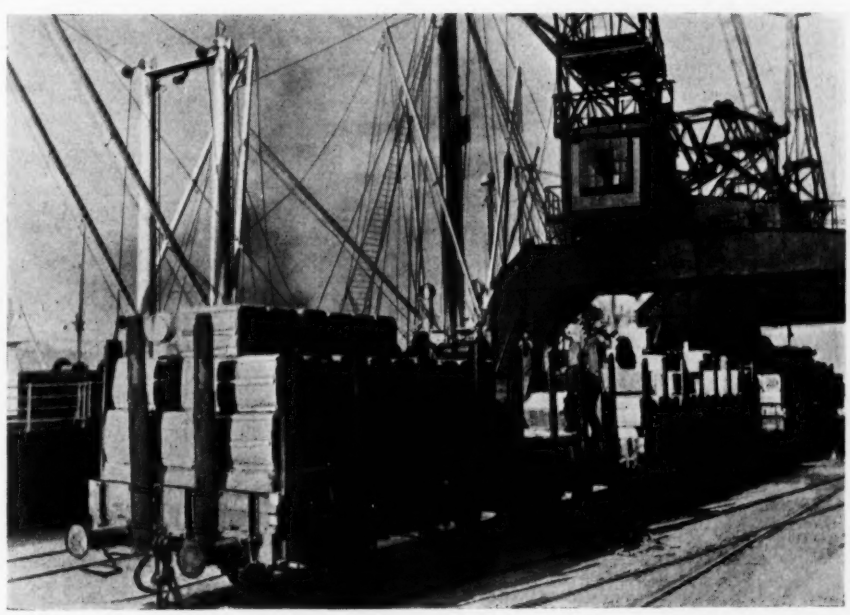
Civil Aviation Developments in the Netherlands Indies

Traffic on the air lines of the Royal Netherlands Indies Airways (K.N.I.L.M.) increased substantially in 1940, especially in the second half of the year which registered a gain of 60 per cent. over the first half, according to the report issued by the company at Batavia, Java, on May 14, 1941, which has recently reached England. The suddenly changed conditions resulting from invasion of the Mother Country made it necessary to maintain regular close contact between all parts of the Netherlands Indies. The increase in the number of passengers carried on K.N.I.L.M. regular lines from 21,075 in 1939 to 27,033 in 1940 is a direct result of this situation and occurred in spite of the fact that all tourist traffic ceased. In 1940 the number of revenue passenger kilometres on the Netherlands Indies air network, exclusive of the Netherlands Indies to Australia line, amounted to 10,724,856 against 6,416,538 in 1939, which represents an increase of 67 per cent. Freight traffic increased by nearly 100 per cent. from 115,055 kg. in 1939 to 202,439 in 1940. The number of ton-kilometres increased from 664,323 in 1939 to 1,118,568 in 1940, or 69 per cent. The Netherlands Indies to Australia air line participated in the increase also, showing in 1940 a total of 4,883,944 passenger-kilometres, against 3,622,096 in 1939, and freight carried amounted to 531,721 ton-kilometres, against 431,206 in 1939. The total quantity of mail carried, at 74,205 kg. compared with 61,182 kg. in 1939, would not suggest an exceptionally favourable increase were it not for the fact that the Netherlands Indies to Australia line in 1940 had been deprived of the important through mail traffic of the K.L.M. from Europe. The increase on the Netherlands Indies air network alone from 45,801 kg. in 1939 to 65,834 kg., or 44 per cent., is considered very satisfactory.

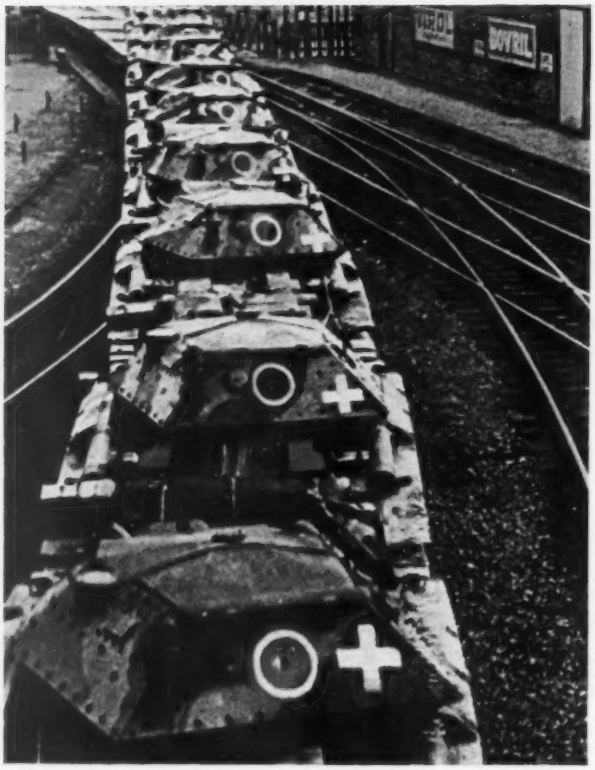
The air fleet consisted of 19 planes on December 31, 1940; two additional planes were on order in the U.S.A. Extensions to the services during 1940 included a second service from Batavia to Medan, inaugurated on January 3, 1940; and the long-anticipated connection with the Eastern Isles—first on August 21 the direct line Soerabaia-Macassar-Ambon-New Guinea, and then, on October 1, the North Celebes line, Soerabaia-Macassar-Gorontalo-Menado-Ternate-Ambon, with an extension to Babo. Details of air transport in 1940 are as follow :—

Flight	Passengers Number	Goods Kg.	Mail Kg.
Batavia-Bandoeng	6,199	56,317	958
Bandoeng-Batavia	6,307	35,148	1,714
Batavia-Semarang-Soerabaia	2,627	8,216	4,158
Soerabaia-Semarang-Batavia	2,453	14,083	10,391
Batavia-Palembang-Singapore-Saigon	590	10,275	2,336
Saigon-Singapore-Palembang-Batavia	605	3,717	1,363
Batavia-Palembang-Singapore-Pakanbaroe-Medan	1,735	20,530	14,416
Medan-Pakanbaroe-Singapore-Palembang-Batavia	1,779	11,505	10,388
Soerabaia-Bandjermasin-Balikpapan-Tarakan ...	1,149	13,569	5,013
Tarakan-Balikpapan-Bandjermasin-Soerabaia ...	1,176	7,439	5,749
Soerabaia-Bali-Macassar	418	3,129	3,051
Macassar-Bali-Soerabaia	395	1,704	2,921
Netherlands Indies-Australia	566	5,748	6,587
Australia-Netherlands Indies	606	4,430	1,784
Macassar-Manokwari	215	2,644	1,498
Manokwari-Macassar	213	2,976	417
	27,033	201,430	72,744
Pleasure flights	2,038	—	—
Charter flights	359	1,009	1,461
	29,430	202,439	74,205

General Service Freight Wagons in Germany



Four-wheel low-sided wagons of the German State Railway with their loads protected by vertical battens. This type of general service wagon, with removable side and end battens, is very widely used in Germany, and is justly popular with traders and the railway staff



British Railways and the War—88

The British railways are playing their part in ensuring fulfilment of our pledge to aid Russia by supplying essential armaments. The accompanying illustrations show trainloads of tanks moving over the L.N.E.R., on their way to the Russian front

GENERAL NEWS SECTION

PERSONAL

WAR OFFICE

Engineer-in-Chief

A change in organisation at the War Office has resulted in the institution of a post of Engineer-in-Chief, the first holder of which is Major-General C. J. S. King, C.B.E., who is a Member of the Institution of Civil Engineers. Among the duties to be carried out by the Engineer-in-Chief are the general consideration of planning and control of engineer work for the Army, the control over the works services of the Army, arrangements for provision of all engineer material and plant required in peace and war, and liaison with the cognate civilian professions of engineering. The last includes the study of developments of engineering at home and abroad and the organisation of the resources of the engineering professions to give the best service to the Army in peace and war.

G.W.R. APPOINTMENT

Miss E. Brenan has been appointed Welfare Supervisor for Women & Girls, under the Chief Staff & Establishment Officer.

SOUTHERN RAILWAY APPOINTMENTS

Estate & Rate Surveyor's Dept.

Mr. J. G. Symes, Assistant Estate Surveyor, and Mr. E. S. Driver, Estate Assistant, retired on October 1.

Mr. R. G. Henbest, Technical Assistant, to be Estate Assistant.

Mr. G. B. Barton, Assistant to the Engineer (Maintenance), Southern Area, L.N.E.R., has been appointed Assistant Engineer, Southern Area, in succession to Mr. W. Y. Sandeman, whose appointment as Engineer, Scottish Area, we recorded in our August 8 issue. Mr. Barton is to continue to act as Maintenance Engineer.

Mr. I. A. R. Stedeford has been appointed a Director of Stewarts and Lloyds Limited. Mr. Stedeford is Managing Director of Tube Investments Limited.

Mr. A. Moller, Chief Engineer of Peter Lind & Co. Ltd., has been appointed a Director of the company.

We regret to record the death on September 19 of Mr. K. L. Mygind, who, with Mr. H. P. T. Lind, has been Joint Governing Director of Peter Lind & Co. Ltd. since the formation of the company.

Mr. F. W. Lampitt, who, as recorded in our October 10 issue, has been appointed Principal Assistant to the Chief Goods Manager, Great Western Railway, entered the company's service in the South Wales District in 1896. Two years later he came to London, and, during the period that followed, gained extensive experience at various London depots. He was engaged at the Victoria & Albert depot and at Park Royal when these stations were first opened, and in 1911 was appointed to the then newly-constructed South Lambeth station. During his stay at this depot which lasted for nearly ten years, Mr. Lampitt developed the facilities for dealing with an increasing tonnage of traffic emanating from the south of the Thames. In 1921, Mr. Lampitt was attached to the Chief Goods Manager's staff at Paddington, and served on various important committees, entailing the visiting of all the larger goods stations on the company's system. These committees operated with the dual function of introducing mechanical appliances and modern methods of book-keeping, and of re-organising the clerical staff and shed working. He was appointed Goods Superintendent at Bristol two years later. During his tenure of office there, Temple Meads goods depot was entirely rebuilt. In 1927 Mr. Lampitt was appointed District Goods Manager at Liverpool, and was responsible for rebuilding Birkenhead goods station, and the re-organisation of the cross-river traffic. He was promoted to be Assistant to the Chief Goods Manager and Development Agent in May, 1931, and in November, 1934, was appointed Commercial Assistant to the Chief Goods Manager. In this capacity Mr. Lampitt devoted himself with conspicuous success to the establishment of new industries on the Great Western system. In particular, he quickly realised the urgent need for the re-industrialisation of South Wales and maintained close liaison with the Special Areas Commissioner and the Nuffield Trust. As a result, Mr. Lampitt was instrumental in attracting a very large number of new undertakings to South Wales. Since the outbreak of war, Government demands for sites for depots and warehouses have received the benefit of his experience. As Commercial Assistant the manifold problems (especially under war conditions) relating to staff reorganisation have also come under his jurisdiction.

Photo [*Russell*

Mr. F. W. Lampitt

Appointed Principal Assistant to the Chief Goods Manager, G.W.R.

Mr. P. R. Blake has resigned his seat on the board of the Western Welsh Omnibus Co. Ltd., and Mr. Raymond W. Birch has been appointed a Director to fill the vacancy.

We regret to record the death on September 28 at Newry of Mr. Wickham Hercules Bradshaw Moorhead, D.L., J.P., who was for many years a Director of the Great Northern Railway Company of Ireland.

Mr. A. W. Bolden, Chairman & Managing Director of the Antofagasta (Chili) & Bolivia Railway Company, and of the Nitrate Railways Co. Ltd., whose death we recorded in our June 20 issue, has left estate valued at £40,688 (net £31,829).

LONDON TRANSPORT STAFF CHANGES

Engineer-in-Chief's Department

Mr. G. H. Tilly, Assistant Superintendent for Lifts & Escalators, has retired from the service of the board owing to ill-health. Mr. I. W. Standring has been made an Officer and appointed Assistant Superintendent (Lifts & Escalators).

Mr. E. T. Brook, Superintendent of Rolling Stock (Railway), has relin-

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quished his railway responsibilities, but is remaining with the board as an Officer, retaining responsibility for London Transport's Home Guard, of which he is Colonel, and the board's air raid precautions. He will also be available for any advice in connection with railway matters.

Mr. A. W. M. Mawby has also been released for whole-time duties with the board's Home Guard Unit.

Mr. J. A. Wilks, at present Second Assistant Superintendent of Rolling Stock, has been appointed Acting Superintendent of Rolling Stock (Railways), and has been relieved

Mr. E. S. Cox

Appointed Chief Technical Assistant to the Chief Mechanical Engineer, Derby, L.M.S.R.

of A.R.P. and other special duties upon which he has been latterly engaged.

Mr. E. S. Cox, whose appointment as Chief Technical Assistant to the Chief Mechanical Engineer, Derby, L.M.S.R., we record elsewhere in this issue, received his training in the Horwich locomotive works of the former Lancashire & Yorkshire Railway, under Mr. George Hughes. Mr. Cox entered the locomotive drawing office at Horwich in 1921, and was transferred in 1925 to the locomotive drawing office, Derby, L.M.S.R., where from 1927 onwards he was in charge of dynamometer car testing. He was transferred to Euston on the staff of the Chief Mechanical Engineer in 1931, and in 1934 became Assistant Works Superintendent, Derby locomotive works. In November, 1937, Mr. Cox was appointed Personal & Technical Assistant to the Chief Mechanical Engineer, and in July of the next year it was announced that he had been selected as Technical Assistant to the Indian Pacific Locomotive Committee which in September, 1938, held an enquiry to investigate the locomotive class involved in the Bihta derailment on the East Indian Railway on July 17, 1937.

The death took place in Toronto on October 8 of Mr. Miller Lash, K.C., President of the Brazilian Traction Company. This company, which is registered in Toronto, controls, among other undertakings, the Rio de Janeiro Tramway, Light & Power Co. Ltd., the São Paulo Electric Co. Ltd., and the São Paulo Tramway, Light & Power Co. Ltd.

L.M.S.R. Appointments

Mr. E. S. Cox, Personal & Technical Assistant to Chief Mechanical Engineer, Derby, to be Chief Technical Assistant to Chief Mechanical Engineer, Derby.

Mr. G. F. Kent, Assistant to District Engineer, Inverness, to be Assistant to District Engineer, St. Pancras, *vice* Mr. C. Haysey, promoted.

Mr. A. E. Cassam, of District Goods Manager's Office, Broad Street, to be Goods Agent, Crewe, *vice* Mr. A. E. Warner, retired.

Mr. J. A. Parsloe, Head Office Inspector, Chief Operating Manager's Office, Watford, to be Goods Agent, Sheffield (Queens Road), *vice* Mr. F. Moxon, promoted.

Mr. A. E. Snelgrove, Chief Claims Clerk, District Goods & Passenger Manager's Office, Stoke, to be Goods Agent, Stoke, *vice* Mr. T. W. Johnson, retiring.

Mr. H. S. McDonald, Goods Agent, Nuneaton, to be Joint Goods Agent, Cheltenham (L.M.S.R. & G.W.R.), *vice* Mr. G. F. Distin, retired.

Mr. F. G. Elsden, Goods Agent, Tamworth, to be Goods Agent, Nuneaton, *vice* Mr. H. S. McDonald.

Mr. T. C. Kendrick, Goods Agent, Tunstall, to be Joint Goods Agent, Macclesfield (L.M.S.R. & L.N.E.R.), *vice* Mr. J. J. Ryder, retired.

Mr. G. H. Rogers, Assistant District Controller, Bletchley, to be Stationmaster and Yardmaster, Carnforth, *vice* Mr. T. Finch.

Mr. A. Hill, Stationmaster & Goods Agent, Upminster; also in charge of Emerson Park Halt & Upminster Bridge, to be Stationmaster, Northampton (Castle); also in charge of Bridge Street, *vice* Mr. H. Preston, retiring.

Mr. P. W. Williams, Stationmaster, Dalston Junction; also in charge of Haggerston, to be Stationmaster & Goods Agent, Upminster; also in charge of Emerson Park Halt & Upminster Bridge, *vice* Mr. A. Hill.

Mr. E. Chilton, Stationmaster & Goods Agent, Royton, to be Stationmaster, Mirfield, *vice* Mr. G. F. Smith, promoted.

Mr. S. Schofield, Stationmaster, Sowerby Bridge, to be Stationmaster & Goods Agent, Bacup, *vice* Mr. J. J. Whalley, promoted.

Mr. G. F. Smith, Stationmaster, Mirfield, to be Passenger Agent, Southport, *vice* Mr. G. McIntyre, retired.

Mr. T. Finch, Stationmaster & Yardmaster, Carnforth, to be Stationmaster, Watford Junction, *vice* Mr. B. Bunker, deceased.

Colonel Alan Wood Rendell, formerly Chief Mechanical Engineer, East Indian Railway, and General Manager, Westinghouse Brake & Signal Co. Ltd. from 1901 to 1922, has left estate valued at £23,709 (net £22,255). Colonel Rendell, whose death we recorded in our August 8 issue, was in his 93rd year.

Mr. J. G. Symes, F.S.I., Assistant Estate Agent, Southern Railway, who, as recorded elsewhere in this issue, has retired, was educated at King's College School, and joined the South Eastern Railway in 1894, as a draughtsman in

Mr. J. G. Symes, F.S.I.

Assistant Estate Agent, Southern Railway, 1936-1941

the Estate Department. After gaining valuable and varied experience, he was promoted to be Technical Assistant in the same Department. In 1933, the amalgamation of the divisional estate offices took place and Mr. Symes became Chief Technical Assistant. In September, 1936, he was appointed Assistant Estate Agent. Mr. Symes is a Member of the Surveyors' Institution.

The death took place in Montreal on September 28 of Sir Herbert Samuel Holt, at the age of 85. Sir Samuel was one of the last surviving pioneers of the original Canadian Pacific Railway builders.

We regret to record the death on September 25 of Mr. Peter Ashcroft Arnott, Chief Engineer of the Belfast & County Down Railway. Mr. Arnott joined the company in 1906 and was Assistant Engineer for some time before his appointment in November, 1919, as Chief Engineer.

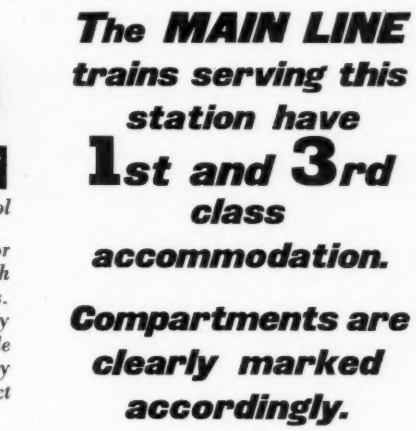
Mr. G. Lawson has been elected Minister of Transport in the new Commonwealth of Australia Cabinet formed by Mr. J. Curtin on October 6.

TRANSPORT SERVICES AND THE WAR—111

First class accommodation in the London area—L.M.S.R. restaurant car facilities curtailed—Irish train services—Free travel for Australian Forces—Partition of Jugoslavia—Communication between Turkey and Bulgaria — Scottish Airways

The drastic reduction, from October 6, of first class facilities in the Greater London area, on the direction of the Minister of War Transport, has taken place smoothly, largely by reason of the care taken by the railways to publicise details of the changes. The distinctive symbol adopted (reproduced below) has been placed in the new timetables over every train affected; it appears as a clip-on on platform finger boards, at ticket barriers, and on train departure indicators. The Southern Railway and L.N.E.R. have taken particular care to notify their extensive suburban *clientele*. The former, in addition to generous use of the symbol, and of poster announcements, has sent a letter over the signature of the General Manager (Mr. E. J. Missenden) to all first class season ticket holders asking them to regard the change as a further personal sacrifice to help win the war. The L.N.E.R. has issued a series of eight posters as follow: (1) For exhibition at G.N. stations within the area which are still served by a reasonable number of first and third class trains; (2) similar for G.E. Section (Cambridge line); (3) similar for G.E. Section (Colchester line); (4) for exhibition at stations where first class accommodation has been withdrawn except for occasional trains; (5) for exhibition where first class is generally available, except on trains specified on the poster; (6), (7), (8) lists of stations with only third class trains.

Above: The symbol



Right: Poster for stations still with first-class facilities. It is deliberately different in style from usual railway posters, to attract attention

Reduced L.M.S.R. Restaurant Car Facilities

The reductions and modifications to restaurant car facilities on certain long-distance L.M.S.R. trains from October 6, to which we referred at page 365 of last week's issue, is a result of the calling up of members of the staff for service with the Forces and the difficulty of replacing the men taken, according to an official statement of the Ministry of War Transport. The full list of trains affected is as follows:—

		Where withdrawn
St. Pancras to Manchester ...	1.30 p.m. (Sundays) ...	Throughout
" " " ...	1.30 p.m. (Weekdays)	Derby-Manchester
" " " ...	5.30 p.m. (Weekdays and Sundays)	" "
Manchester to St. Pancras	7.20 a.m. (Weekdays)...	Throughout
" " "	2 p.m. (Sundays) ...	"
" " "	5.50 p.m. (Weekdays and Sundays)	Manchester-Derby
St. Pancras to Sheffield	9.5 a.m. (Weekdays) ...	Throughout
" " "	3 p.m. (Sundays) ...	"
Sheffield to St. Pancras	9.13 a.m. (Sundays) ...	Sheffield-Derby
" " "	9.30 a.m. (Weekdays)...	"
St. Pancras to Bradford	12 noon (Sundays) ...	Derby-Bradford
Bradford to St. Pancras	12.20 p.m. (Weekdays and Sundays)	Throughout
Euston to Blackpool	10.40 a.m. (Weekdays)	Crewe-Blackpool
Blackpool to Euston	2.45 p.m. (Weekdays)	Throughout
Liverpool (Lime Street) to Hull ...	11 a.m. (Weekdays) ...	"
Hull to Liverpool (Lime Street) ...	3.55 p.m. (Weekdays)	"

Refreshments continue to be available at the principal stations on these routes.

G.W.R. Yealmpton Branch

On July 21, the Plymouth—Yealmpton branch of the G.W.R. was re-opened for passenger traffic with one workman's train every weekday, after having been without passenger trains since the withdrawal of the regular passenger service on July 7, 1930. It has now been decided to restore full passenger facilities, and from November 3 a service of eight trains every weekday (third class only) will be run between Plymouth Friary (Southern Railway) and Yealmpton. Details are given in the G.W.R. winter timetable.

Railway Symbols

The success of the Underground symbol of a circle with a bar through it, is proved by the fact that the public has become so accustomed to it as to obviate the need for the words "London Transport" to appear across the bar. The primary value of the symbol is that neither wording nor colouring should be necessary to indicate to what it refers. Symbols therefore become of increasing value in blackout conditions. Some time ago the G.W.R. standardised the design in a circle on its vehicles, cap badges, etc., while the

TO SENDERS AND CONSIGNEES OF GOODS
PLEASE
Pack your goods securely
Label your goods clearly—using Black Ink on White Paper—and be careful to comply with the Regulations for the Addressing of Goods by Merchandise Train, including the recently amended Regulation respecting consignments consisting of more than ten packages
Make out consignment notes clearly
Have goods ready for despatch early in the day
Do not delay railway vehicles effecting collection or delivery
Do not detain wagons a moment longer than is necessary
THANK YOU
GWR LMS BRITISH RAILWAYS LNER SR

A new Railway Executive Committee poster. It will be noticed that, for the first time, the familiar wartime "British Railways" is supplemented by the symbols of the four main-line railways

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L.N.E.R. adopted Eric Gill's "oval" pointed at each end. In order to complete the series, the L.M.S.R. is now indicated when necessary in a rectangle, and the Southern Railway in an ellipse indented top and bottom between the letters S and R. At joint stations two of these symbols could be seen against the sky in the dark, and gradually the public would come to know what railway was indicated. The value of the shapes of these symbols could also be used on posters, advertisements, and so forth, and could be used as a totem as shown on the accompanying sketch. At the moment they are in use at the bottom of some of the "British Railways" joint posters, the first of which is reproduced on page 391.

Drastically Curtailed Irish Train Services

In THE RAILWAY GAZETTE of August 1 reference was made to a considerable curtailment of Irish passenger train services. Since then, due to lack of coal supplies, it has been found necessary by the Great Southern Railways of Ireland to make a further reduction, this time to the minimum consistent with the maintenance of trade and communication, and the services now in operation, it is stated have been made possible only by Government intervention to supply the company with fuel for the services now put into operation. As from October 8 the two-train service on the main lines has been cut to a single train daily in each direction, and on a number of branch lines passenger trains have been discontinued. The timetable has been cancelled, and the issue of monthly excursion tickets has ceased. With the exception of the suburban lines, namely, Dublin-Bray-Greystones, Cork-Cobh-Youghal, and Waterford-Tramore, where the present timetable continues to operate, all main-line and branch-line services will be affected. Thus, a single service now runs daily between the principal termini, such as Dublin, Cork, Limerick, Galway, and Waterford. There is now no passenger train service on the Dublin-Navan-Kingscourt-Athboy branches, or the Clare-Streamstown-Mullingar branch. The night mail services on the Southern and Western sections have been discontinued, and are, generally, only one arrival and despatch of mails every day by trains timed to work as follow: Dublin, 9 a.m., due Cork 4 p.m.; Cork 11.15 a.m., due Dublin 6.10 p.m.; Dublin, 10 a.m., due Galway 3 p.m.; and Galway, 11 a.m., due Dublin 4 p.m. On the Eastern section night mail services are maintained as heretofore. Goods trains are not affected by these recent curtailments.

Completion of London Transport Damage Repair

In THE RAILWAY GAZETTE of October 3, at page 339, reference was made to the expedition with which repairs have been carried out on the London Transport railway system in the Metropolitan Area after the heavy air raids of last winter. On the line to which we then referred in particular, namely, the Metropolitan Line section between Euston Square and King's Cross, train services were resumed on October 5. This completes London Transport's emergency repairs.

Uniformed Troops and the Canada-U.S.A. Border

An agreement has been signed between Canada and the United States whereby the Armed Forces of each country may cross the Border freely. In the past the immigration regulations prevented men in uniform crossing. It is expected that the new regulations will stimulate the enlistment of Americans in the Canadian Forces.

C.P.R. Transports 231-ft. Barge to Coast

For salt-water service, the Canadian Pacific Railway has recently dismantled a large barge, 231 ft. long, previously in service on lakes Kootenay and Arrow, and forwarded it in sections to the coast. The barge had to be cut longitudinally and into lengths convenient for loading on bogie trucks. The rivet heads were melted by acetylene flare and the rivets driven out by pneumatic hammer to effect the "cutting up" process. The sections thus formed were then hauled by donkey engine transversely across rail skids on sleeper cribs to the trucks.

Free Travel for Australian Defence Forces

Supplementing the concessions to members of the Australian Fighting Forces previously referred to (see THE RAILWAY GAZETTE of June 20, 1941, page 689), it has now been agreed between the Australian Commonwealth and State Governments that as from July 1, 1941, and for the duration of the war, all members (male and female) of the Australian Defence Forces borne on the pay strength of the Navy, Army, and Air Force, whether enlisted or appointed for service overseas or in Australia, when travelling in uniform on leave, shall be granted—to enable them to visit their homes not more than once during any calendar month—free travel for the necessary railway journey, local or intersystem, over any Government railway, State or Commonwealth, including the Tasmanian Government Railways. The free travel is from the railway station nearest his unit to the railway station nearest to his home and return. The free travel includes reserved seats where provided, and sleeping berths where such are compulsory. Travel is made on a combined home leave pass and railway ticket issued by the Defence authorities. The cost of travel is adjusted between the

GET YOUR GOODS BEFORE WINTER REDUCES DAYLIGHT

One hour's daylight is worth four in the Blackout.

Blackout and bad weather retard movement.

Daylight transport is quicker and safer.

Order winter supplies now.

HELP THE RAILWAYS TO DELIVER THE GOODS

BRITISH RAILWAYS
GWR — LMS — LNER — SR

CHEAP DAY TICKETS TO LONDON
(MONDAYS TO FRIDAYS)
ON AND FROM
1ST OCTOBER
RETURN HALVES
ARE NO LONGER AVAILABLE BETWEEN
4.30 P.M. & 6.30 P.M.
MORE ROOM FOR WAR WORKERS
GWR LMS BRITISH RAILWAYS AND LONDON TRANSPORT LNER SR

Above: New R.E.C. announcement

Left: Recent British Railways newspaper advertisement

Commonwealth, the State Governments, and the railway systems concerned.

This free fare concession once a month takes the place of one of the fortnightly home leave concessions (maximum fare 5s.) previously referred to as being granted to members of the Defence Forces enlisted for overseas, and such members may visit their homes twice in any calendar month—once free and once by payment of the home leave maximum fare of 5s. With this exception all the existing fare concessions previously referred to are continued.

Transport in Occupied Territories

Both Mr. Churchill in his review of the war situation in the House of Commons on September 30, and Hitler in his speech in Berlin on October 3, made references to transport in occupied territories. The British Prime Minister, referring to the possible moves which might be made by the German Forces, envisaged a possibility that the enemy might shift his weight to the west " using the great continental railways of Europe and the immense chains of airfields which are in excellent order." Mr. Churchill later said that the enemy had the divisions, he had the weapons, and " on the mainland of Europe he has ample means of transport."

Hitler, referring to the German campaign against Russia, said that in the rear 25,000 km. of Russian railways had been reconstructed and put into service, and that 15,000 km. had been switched over to the German (standard) gauge.

The Partition of Western Jugoslavia: New Italo-German-Croat Frontiers in the West

In the extreme north-western corner of Jugoslavia the Italian frontier line remains unaltered, so that on the Jesenice—Tarvisio line Ratče-Planina (Ratschach-Matten) remains the German frontier station (28 km. west of Jesenice), and Fuzine-Laghi (2·8 km. farther west) is still the Italian frontier station. Also, on the Jesenice—Gorizia—Trieste section the frontier remains at the long Bohinsko tunnel, with Bistrica-Bohinsko Jezero (Feistritz-Wocheinersee) to the north as the German frontier station and Podbrdo (Piedicolle), to the south, the Italian frontier station. It may be mentioned in passing that so efficiently did the Jugoslavs blow up this tunnel, that it is still out of commission. The Ljubljana—Trieste double line which formerly crossed the Italian-Jugoslav frontier between Rakek and Posturnia is now wholly in Italian-occupied territory, and traffic over it was resumed on June 26.

In the immediate vicinity of the important junction, Ljubljana (Lubiana) the German-Italian frontier line has been drawn tightly round the town and junction, these being in Italian occupation, but the German-occupied territory comes to within about 5 km. The frontier stations in this area are therefore :—

Section of railway	Frontier stations	
	Italian	German
Jesenice—Ljubljana	Ljubljana Šiška (Lubiana Siska) (1·0 km.)	St. Vid—Vižmarje (St. Veit—Vischmarje) (7·0 km.)
Ljubljana—Kamnik (narrow gauge) ...	Ljubljana Siska (1 km.)	Crnuče (Schwarzendorf) (6·4 km.)
Ljubljana—Maribor (double main line) ...	Zalog (Salloch) (8 km.)	Laze (Laase) (15 km.)

The distances given are from Ljubljana

The frontier separating the Italian- and German-occupied zones continues eastwards from Ljubljana and is crossed by the recently-completed Sevnica-Trebnje chord line, connecting the main double Ljubljana—Zidani-Most—Zagreb line (at Sevnica) with the Ljubljana—Karlovac section. The frontier stations are Mokronog Bistrica (Nassenfuss-Feistritz) on the Italian side, and Tržišče (Marktl) on the German, 18·5 and 12·7 km. south of Sevnica respectively.

Proceeding eastwards from Sevnica towards Zagreb, the main line next passes from German-occupied into Croatian territory between the frontier stations of Dobova and Savski Marof, 50 and 56 km. respectively east of Zidani-Most (Steinbrück). The two main lines to Maribor and Vienna and to Zagreb and Belgrade bifurcate at Zidani-Most. Savski Marof is 22 km. from Zagreb.

This same German-Croatian frontier is also crossed farther north by the Grobelno-Savski Marof loop line connecting the two main lines just referred to; the frontier stations are Sveti Rok-Lupinjak (St. Rochus), 39 km., and Djurmauec, 48 km. east of Grobelno; the former is in German and the latter in Croatian territory.

Due to a strip of country having been ceded to Hungary, the new frontier between German-occupied Jugoslavia and that country is now crossed by the Pragersko (Pragerhof)-Čakovec-Murakerestur-Budapest line between Središče (Polstrau) (German) and Čakovec (Hungarian), 50 km. and 61 km. east of Pragersko, which junction is on the Maribor main line and about 17 km. south of that town. This revision of the frontier including Čakovec in Hungarian territory, also places the two branch lines from that station in it. The most promising oil wells in Jugoslavia are at Središče, and were at one time controlled by the Swiss Holdinhand concern, but later were sold to the Elvenrath Oil Company of Hanover. As recently as early this year the property passed into the hands of a mixed Jugoslav-Italian company controlled by the Italian quasi-government oil concern, Agip.

In the next belt of country further south the Italian sphere, as shown above, has come eastwards from the old frontier as far as Mokronog Bistrica near Sevnica, but from there the new border turns southwards to cross the Ljubljana-Karlovac line at Bubnjarci, 29 km. west of Karlovac, which station is just in Italian-occupied territory. Karlovac and all country east of Bubnjarci is now Croatian. This new Italian-Croat frontier also crosses the Fiume-Sušak-Karlovac-Zagreb line at Plase-Crikvenica, 27 km. east of both Fiume and Sušak, formerly the rival Italian and Jugoslav ports close on each side of the frontier. From Škrljevo station, 12 km. east of Sušak on the Karlovac line, a spur line runs into Fiume. Regular traffic over the Ljubljana-Karlovac and Fiume-Šusak-Karlovac-Zagreb—both single standard gauge—lines was resumed on August 16.

Croatian State Railways Tariffs

The Croatian State Railways administration, which had continued to use the Jugoslav tariffs in force from April 1, 1941, increased the rates by no less than 50 per cent., with effect from September 1. It is recognised, however, that even this advance will not enable the system to show any working profit. On the other hand, the country's economic position could hardly bear a more drastic increase of the railway rates. The State Railways administration has also officially adopted the designations of the new currency units, namely, " Kuna " instead of " Dinar " and " Banica " instead of " Para."

New Frontier Stations between Jugoslavia and Bulgaria

In Bulgarian-occupied territory of Jugoslavia, Bela Palanka (then in Bulgarian occupation), on the main line from Belgrade to Sofia, functioned as a frontier station from the outset, that is from July 1. Bela Palanka is 33½ miles (54 km.) to the west of Tsaribrod, the former Jugoslav frontier station on this line; Dragoman, 13 miles (21 km.) to the east of Tsaribrod, was the Bulgarian frontier station. On August 5, Čiflik, a little more than 5½ miles (9 km.) to the east of Bela Palanka, became the frontier station and Bela Palanka was occupied by the Germans.

Further south, the Nish-Skoplje section of the Belgrade-Salonica line also crosses into Bulgarian-occupied territory between Uroshevac (54 km.)—in the German-occupied zone—and Grlica (Grdelita) (45 km. north of Skoplje), the Bulgarian frontier station. On the 60-cm. line running west and south-west from Skoplje the last Bulgarian-occupied station is Glumičin, 43 km. west of Skoplje. These stations have all been functioning as frontier stations since July 1.

Montenegro Carved out of Jugoslavia

The frontiers of Montenegro, the State now re-created by the Axis Powers, have been fixed along approximately the 1914 line. The railway situation is very little affected, as there are only isolated short lengths of line in the new puppet kingdom. The new frontier leaves a short length of coast line to Montenegro, with two small ports, Ulcinj near the Albanian frontier, and Bar (Antivari) close to the new Croatian frontier. A private railway, 41 km. long, with 10 stations, connects Bar with Virpazar, whence a mountain road leads to Cetinje, the capital. An isolated section of

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Government railway exists between Podgorica, on the projected Cetinje—Pristina line, and Donja Plavnica; it is 21 km. long and has six stations. These two existing lines are both of 2 ft. 6 in. gauge. The projected standard gauge Pristina—Cetinje line is open from Pristina to Pec. Pristina is just on the Nish side of Kosovo Polje, in the section outside the new Serbian territory, operated by the Bulgarian Railways. Pec is 35 km. inside the new Montenegrin frontier. No construction work has begun on the further sections in Montenegro, nor on the narrow gauge line from Bileca, in Croatia (close to the border), to Niksic, in northern Montenegro, which would run into Montenegrin territory.

In the eastern part of the annexed Jugoslav territory the Graz to Maribor section has been repaired and reopened, though the bridge across the Save near Maribor is still under repair, and the route from Maribor to Zagreb using this crossing was to be reopened during September.

Widespread Attacks on Railways by Balkan Patriots

German agents are reported to be scouring the Balkan and other occupied countries for rolling stock for the Russian front. To forward this to its destination and to maintain lines of communication with Roumania, Bulgaria, and Greece are of vital importance to the Axis Powers. The Fiume-Split railway is threatened constantly by large forces of Serbian irregulars. Guerrillas are stated to have demolished a bridge on the railway to Zenica, an important centre of heavy industry in Bosnia. In the same area traffic on the Dubos-Duzla section of line has been several times interrupted by them, and they have destroyed a train near Karditza. Part of the Belgrade-Nish line is reported to have been torn up, after the irregulars had overpowered the guard upon it. An armoured train and motor patrols were used to protect labour effecting the repairs, which took two days.

Serbian patriots also caused the Sarajevo-Cacak line to be closed, and interrupted traffic on the line to Mostar on the Adriatic coast.

Despite greatly strengthened garrisons supported by Stuka dive-bombers, Serbian guerrillas successfully held up all trains between Belgrade and the Bulgarian frontier for 10 days recently. Eventually, trains could be run only under escort of armoured trains.

Jugoslav guerrillas are reported as having destroyed four sections of the Maribor-Trieste railway, and to have derailed two troop trains and demolished several bridges between Varazdin and Cakovets.

Transport Restrictions in the Near East

Reports from Geneva state that the directors of the German State Railway have declared that no freight will be transported for the present from Bulgaria, Greece, Croatia, Serbia, Roumania, and Turkey to Belgium, Denmark, France, Holland, Norway, Sweden, Finland, and Switzerland, in view of transport difficulties.

Foreigners wishing to travel from Turkey to Europe *via* Thrace must obtain a special permit from the military authorities at Istanbul. No permit is, however, necessary for those crossing other Turkish frontiers such as the Russian, Persian, Iraqi, or Syrian. Military guards accompany all trains from Istanbul through European Turkey to Sofia.

Restoring Rail Communications in Turkey and Bulgaria

On September 17 an agreement was signed in Ankara between Turkish and German delegates for the reconstruction of railway bridges on the Turko-Greek and Turko-Bulgarian borders, destroyed last April. On political and military grounds the Turks are stated to be chary of hastening the resumption of trans-frontier communications, and consequently the repairs are unlikely to be expedited. On the other hand, Turkish engineers and labour are reported to be arranging to rebuild the Maritza river bridge, on the Orient express route, by agreement with the Bulgarians, and the temporary bridge was likely to be ready for use early this month; the permanent structure is to be reconstructed by January next. The Germans are supplying the steelwork for this work.

Under the direction of German engineers the Bulgarians are hastening the repairs of the Belgrade-Nish, Nish-Sofia, and Nish-Salonika railways.

New Turkish Railway Construction

Construction of the railway lines from Bismil and Mamuret el Aziz to the frontiers of Iraq (near Cizre) and Persia (at Qutur) is provided for by a Turkish law dated June 3, 1941. The Turkish Minister of Finance is authorised to arrange for the issue of bearer bonds for a total sum of £T.35,000,000, of which not more than £T.15,000,000 may be issued in any one year. The proposed lines to Qutur will be of additional strategic importance when the Persian extensions from Tabriz (5-ft. gauge) and Teheran (4 ft. 8½ in. gauge), which were indicated on the map at page 326 of our October 3 issue, are built.

The Railways of Eastern Poland

The *Krakauer Zeitung* of August 21 reported the official incorporation of the railway system of the new Province of Galicia into that of the General Government, known as the Ostbahn. This took effect on August 1, and applied not only to operational control, but also to matters of ownership and rolling stock. A similar decree brought the postal and telegraph systems of Galicia under the same control as those of the Central Provinces.

Axis Transportation Expedients

Germany and her vassal countries are evidently exerting every effort to procure transport vehicles of various kinds or materials for their construction. Buses from Western Europe bearing the names of Brussels, Knocke, and Bruges are reported to have been impressed into military service in eastern Roumania.

Meanwhile, it is reported that the Hungarian Government has ordered the demolition of the defences on the former Czech and Jugoslav frontiers, which, it is estimated, will provide sufficient scrap steel to build 28,000 railway wagons.

Extension of Electrification in Sweden

Electrification of the Northern line to the Finnish frontier has been speeded up to release locomotive power for steam-operated lines. and to increase the transport capacity of this important Northern link. On August 1 the Vännäs-Bastuträsk section, 112 km. (70 miles) was opened to electric operation,, on September 1 the Bastuträsk-Jörn section, 33 km. (20 miles). The electrified lines in Sweden now total 4,065 route km. (2,526 miles).

The Trans-Sahara Railway

A supplementary credit of fr. 113,000,000 has been allocated for the construction of the Mediterranean-Niger Railway, according to a press message from Vichy. This is in addition to the credit of 150 million francs allocated three months ago for the same purpose. The supplementary credit is intended to facilitate the completion of the section between Boursa and Kenadza to within 12 miles of Colomb Bechar. The section from Boursa to Kenadza runs from the south of Morocco to 95 miles south inside Algerian territory.

Scottish Airways

The principal features of the revised winter timetable of Scottish Airways Limited, effective from Monday, September 22, are as follow:—

Inverness—Kirkwall—Shetland Service.—No change has been made in the frequency of this service, which will operate throughout the winter twice daily (except Sundays) in each direction between Inverness and Kirkwall and once daily in each direction between Inverness, Kirkwall, and Shetland.

Glasgow—Campbeltown—Islay Service.—This service will continue to operate twice daily (except Sundays) in each direction, but the times of the afternoon service have been advanced.

Glasgow—Tiree—Benbecula—North Uist—Stornoway Service.—A daily service (Sundays excepted) will be operated in each direction on this route. During the mid-winter period, however, from November 10, 1941, to February 21, 1942, the service will operate thrice weekly in each direction; northbound on Mondays, Wednesdays, and Fridays, and southbound on Tuesdays, Thursdays, and Saturdays.

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Questions in Parliament

Below are summarised Answers to Questions in Parliament affecting transport. The Minister concerned and the date of the Answer are given in parentheses.

Road Marking

The Ministry of War Transport will continue to impress on highway authorities the importance of ensuring that white lines on all major roads and other aids to movement are properly maintained. Substantial grants are available from public funds to road authorities for this purpose. (Colonel J. J. Llewellin, Joint Parliamentary Secretary, Ministry of War Transport, September 30.)

Persia and Iraq Railways

The railways in both Persia and Iraq are being worked by the respective State railway administrations. The military authorities are co-operating with the administrations in making provision for British and Allied traffic. Railwaymen from India and other countries are being employed in this connection. Charges for the carriage of British and Allied traffic are being credited to the railway administrations concerned. (Captain D. H. Margesson, Secretary of State for War, September 30.)

Road Accidents

In wartime the measures that can be taken to reduce road accidents are necessarily limited. The problem can effectively be tackled only with the full co-operation of all road users—drivers, cyclists, and pedestrians. The Ministry of War Transport has accordingly arranged for an intensive road safety campaign to be undertaken by the Ministry of Information during the coming winter. This will make use of press, broadcasting, and film. The Board of Education is arranging for special attention to be given to the instruction of schoolchildren in road safety questions. The Home Secretary has assured the Ministry of War Transport that the police will do their utmost to ensure such traffic supervision as is possible under present conditions. A number of suggestions is being considered in order that every practicable step may be taken to reduce road accidents. (Colonel J. J. Llewellin, October 1.)

Maintenance of Road Vehicles

The Ministry of War Transport is taking all practicable steps to ensure that adequate and suitable labour is available for the maintenance of essential road vehicles. A statement on the main recommendations of the Report of the Motor Vehicle Maintenance Advisory Committee and of the action being taken was published on September 19. (Colonel J. J. Llewellin, October 1.)

Spare Parts for Road Vehicles

I am satisfied that the action taken by the Ministry of Supply is resulting in a supply of spare parts sufficient to meet the requirements of essential civil transport. Greatly increased allocations of raw materials and productive capacity have been made for this purpose. As to the supply of tyres, a scheme has been introduced in conjunction with the Ministry of War Transport, for ensuring that tyres are available for essential vehicles. This scheme is working smoothly. The Ministry of Supply has also directed vehicle manufacturers to arrange for reclaiming and reconditioning used spare parts wherever practicable. (Captain Harold Macmillan, Parliamentary Secretary, Ministry of Supply, October 1.)

Derelict Railway Tracks

The Railway Executive Committee has already taken action to ensure that appropriate use is made of any tracks no longer required for traffic purposes. The old tramway tracks are being taken up as labour is available to do so, and also to replace the road services afterwards. (Colonel J. J. Llewellin, October 1.)

Rations for Drivers and Conductors

The special ration of cheese is granted solely to meet the need of certain categories of workers who require to take suitable food with them to their work and who are unable to make use of canteen facilities. I do not feel, therefore, that the concession can be given to public transport drivers and conductors. The possibility of improving the provision of food supplies for the men in question while they are at work is, however, receiving close attention. (Major G. Lloyd George, Parliamentary Secretary to the Ministry of Food, October 1.)

Road Transport Workers

The urgency of making improved provision for meals and sleeping accommodation for road transport workers is fully recognised, and the details of a scheme drawn up after consultation with members of the Food Sub-Committee of the Road Haulage Central Wages Board are now being worked out by the Ministry of Food, Ministry of War Transport, and Ministry of Labour. I hope it will be possible to announce the details of this scheme and to put it into operation very shortly. (Mr. R. Assheton, Parliamentary Secretary, Ministry of Labour & National Service, October 1.)

Civil Defence Workers

Shift workmen's tickets can be obtained on the railways by whole-time Civil Defence workers who are employed as artisans, mechanics, or labourers. Other whole-time Civil Defence workers can take advantage of the concession announced recently, by which, when travelling between their homes and places of employment, they can obtain return railway tickets valid for two days at the cost approximately of single ordinary fare for the return journey. (Colonel J. J. Llewellin, October 1.)

Canal and Coastwise Coal Traffic

A statement was recently issued to the Press showing the action which is being taken on Mr. Frank Pick's recommendations in connection with canals on war work, together with a statement of the tonnage of coal and other fuels carried by canals and inland waterways during the six months ended June 30, 1941. Although the canals have lost much of the coal previously forwarded for shipment, the weekly tonnage of canal-borne coal for home consumption has risen by about 15 per cent. during the present year. Figures of coastwise coal shipments are not published and I do not consider their disclosure to be in the public interest. (Colonel J. J. Llewellin, October 2.)

Railway Level Crossings

In the preparation of post-war schemes the Ministry of War Transport's policy of promoting or encouraging the elimination of level crossings is being continued. (Colonel J. J. Llewellin, October 2.)

Railway Agreement Details

It is not yet possible to give the date when the full text of the complete revised financial arrangements between the Government and the railway undertakings will be published. The matter is being pressed on as much as possible. The railway companies have agreed to come under the same provisions as to war damage as public utility companies generally. (Colonel J. J. Llewellin, October 8.)

Parliamentary Notes

Food for Railwaymen

Mr. James Griffith (Llanelly—Lab.), on the motion for the adjournment of the House of Commons on October 2, raised the question of the distribution of food to heavy workers. During the Recess he had spoken to some railwaymen. These men said that last winter very many of them, after joining their train, did not return home for 16 or 17 hours. That was not very exceptional, because often in those circumstances the trains would be held up at some point where there was no opportunity at all of getting any extra food or drink. They urged that, with the strain of those very long hours on the inadequate food which they could bring from home, this winter would be a very severe test of their health. No canteen facilities could meet a problem of that type, for a train might be held up in the heart of a country district. They did, however, make one suggestion, and that was that when men had to work a train to some point several hours away some provision for meals ought to be made at that point. He was sure they all wished to pay a tribute to the work the railwaymen did under intensive air raid conditions. He travelled much by train, and he admired them. Surely it ought to be possible for them to be provided with a hot and sustaining meal at the end of a long journey.

Major G. Lloyd George (Parliamentary Secretary, Ministry of Food) said the aim of the Ministry of Food was to secure that workers should take at least one full meal in the day at their work. A great deal had been done to provide canteens for that. They covered not only workers in factories but among others dockers, and while they must pay a tribute to railwaymen and others he thought they ought to recognise the valuable work done by the dockers of this country, who saved a great deal of shipping by the speed of their turn-round. There were at this moment something like 15,000 canteens which provided 16,000,000 meals a week, apart from hot beverages. The number of hot beverages a week was about 45,000,000. There were now over 1,000 British Restaurants, which served 1,000,000 meals a week. The question of transport drivers on trunk roads was now being considered. It was intended to increase food supplies to a limited number of transport cafés on the main trunk roads, thus ensuring that those workers, especially those connected with night driving, had adequate facilities for obtaining suitable food.

As to the canteens in the first priority category, which would be decided in consultation with the Minister of Labour, he suggested that those establishments would embrace the industries engaged in the heaviest form of labour. In those canteens it was hoped to double the meat allocation and treble the sugar allocation. Further, it was hoped to make available increased supplies of bacon and ham, cooking fats, and if supplies permitted, a

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supply of processed eggs. As for those canteens from which workers got packed meals—and he thought that would meet the points raised by Mr. Griffith—if it was possible, and he thought it was, to arrange for a proper supply of commodities for packing purposes, this should meet the position.

Mr. Evelyn Walkden (Doncaster—Lab.) said that at a railway centre where there were something like 4,000 people employed, the workers had not the eight ounces of cheese ration to help them along, and they had no canteen. There must be direction, drive and determination on the part of some Minister who was entrusted with the full responsibility for the task, and in view of the criticisms which had been levelled the Cabinet must recognise that there was an agitation springing up. He hoped that the Parliamentary Secretary would do something about it and that the War Cabinet would re-examine the whole situation and recognise the responsibility of the Government in the difficult position in which they found themselves.

Major Lloyd George said he would give close attention to all the points raised.

Coal Supply

The Earl of Listowel, speaking in a debate in the House of Lords on October 1 on coal supply, said that passenger services on the railways had been considerably reduced, but they had not yet been cut down to a minimum. The Government should render unnecessary travel impossible by not allowing the railways to run additional trains during holiday periods, and by obliging them to cut the rest of their passenger traffic to the bone. Over 5,000 tons of coal were used by relief trains on August Bank holiday. While present conditions continued that should not be repeated.

Lord Templemore, on behalf of the Department of Mines, said that during the winter of 1940 enemy action made it very difficult to transport even the output of coal which was available. A great many stations were bombed, some of them repeatedly, and a great many marshalling yards were out of action for some days. In addition to working under very difficult conditions with the long hours of blackout and enemy air attacks, the railways had to carry a very large volume of other war traffic and increased imports, often by unusual routes, and the inevitable reduction of coastwise shipping meant that more traffic of all kinds had to be transferred to the railways. Those circumstances might very well recur this winter, but steps had been taken to minimise their effect as much as possible. A Mines Department Transport Committee, which included representatives from the Ministry of War Transport, the Railway Executive Committee, and the railway companies, was meeting regularly to review the coal transport situation and take suitable action. The Department was continuing its policy of last winter of running special coal trains each week from Northumberland and Durham and from the Midlands and South Wales. Those programmes served to supplement coastwise shipments to the South of England and to meet the increasing demands of war factories in such areas as Lancashire, and they were made possible only by reduction of passenger services. Production on the north-east coast and in the Midlands had not always been sufficient to enable these facilities to be fully used, but in order to meet the increase in production which was now taking place it had been agreed to run thirty extra trains a week from the north-east coast, and if the railways were able to do so those train programmes would be still further extended if the situation demanded it. Arrangements had also been made to work the Cumberland ports to full capacity for shipments of coal to Lancashire, the south-west of England, and Northern Ireland. A substantial measure of priority was accorded in the early part of the year for coal traffic to certain Great Western destinations, mainly from the Midland (Amalgamated) District, and that district had now agreed a flexible programme of traffic through all the exchange junctions to the Great Western system.

To deal with special problems of South Wales traffic a joint committee of colliery owners and representatives of the railway companies was set up to regulate the flow of coal from the collieries to conform with the amount which could be handled each week by the railways. At the beginning of May, by the adoption of exceptional measures, the railways were able to increase the figure to 150,000 tons a week, and at the beginning of September the figure of 175,000 tons a week was reached. Although during the winter it would naturally not be possible to maintain the high levels possible just now, it was hoped to transport a much higher tonnage out of South Wales by rail than could be done last year.

The railway companies had made and were making considerable structural improvements on the railway system to avoid congestions and to increase line and marshalling yard capacity. Attention had also been paid to speeding up rail working at night. In order to avoid as far as possible a recurrence of the shortages experienced last winter the Mines Department had taken measures to effect a quicker turn-round of coal wagons by the appointment of Coal Traffic Inspectors.

Agreement had been reached between the coal traders and the railways on the question of demurrage on wagons of house coal, and a Central Wagon Control had been instituted by the Ministry of War Transport to promote the proper distribution of wagons between coalfields with good results. In the interest of transport economy and to increase the carrying capacity of the railways, steps had been taken to develop still further the movement of coal in trainloads or, where that was not possible, in blocks of wagons so as to reduce the time spent in shunting at intermediate points. The collieries were working in close co-operation with the local railway officers and, wherever circumstances permitted, coal wagons were marshalled in the colliery sidings so that the minimum of shunting was required *en route*. To improve organisation, the districts in the West Midlands had been grouped under the officers responsible for coal supplies and railway operation on the lines of the organisation in the Midlands (Amalgamated) District and a Co-ordinating Coal Supplies Officer had been appointed in the area to work in close co-operation with the chief railway officials to obtain all improvements possible in rail transport. The policy of the Department, in agreement with the Ministry of War Transport, was to make the utmost use of road transport for the conveyance of coal, particularly to relieve the railways on short hauls and so free railway wagons for the more distant deliveries.

Staff and Labour Matters

Wages of Horse Carters

The National Arbitration Tribunal has recently issued its awards on a claim "For the observance of the wages and conditions applicable under a joint agreement to carters employed by general cartage contractors," made by the Scottish Horse & Motormen's Association on behalf of the employees of Wordie & Co. Ltd., Cowan & Co., and Mutter Howey & Co. Ltd. The dispute arose out of a claim by the association "for the observance of the wages and conditions specified in the memorandum of agreement between the Scottish Carting Contractors' & Horse-Owners' Association, and the Scottish Horse & Motormen's Association, dated May 23, 1941."

In the evidence submitted to the tribunal reference was made to the rates of wages and conditions of employment at present in operation, being the rates and, substantially, the conditions which are applicable under decisions of the National Railway Wages Board (of which neither of the parties in the present case are members) to carters employed directly by the railway companies.

The tribunal states that it deprecates the existing arrangements under which the wages and conditions of an organised body of workpeople are virtually settled by machinery in which such workpeople's organisation have no part; and it considers that the question of more satisfactory machinery for determining the wages and conditions of the employees of the railway cartage contractors in Scotland should be carefully explored by all the parties affected. The question in this case was, not that of the method by which the wage rates and conditions of the employees have been arrived at, but whether they are on their merits appropriate in present circumstances or should be replaced by the rates and conditions provided by the agreement of May 23, 1941. On this question the tribunal finds against the claimants.

NORDDEUTSCHER LLOYD GENERAL PASSENGER AGENCY (GREAT BRITAIN) LIMITED.—Persons having claims against this company are required to send proofs of their claims to the liquidator, Mr. Alfred Parker, 3-4, Clements Inn, W.C.2, not later than to-day (October 17). No claims in respect of unused steamship tickets can be admitted as these are the liability of the steamship company and not of the London agency. A meeting of creditors will be held to-day at 3 p.m. at the offices of the liquidator, to receive his accounts for the year ended May 21, 1941.

B.S. GRADING RULES FOR STRUCTURAL TIMBER.—New British Standard Rules for the Grading of Structural Timber (B.S. 940) have recently been published. They give the gradings for the 800-lb. grades of redwood, scots pine, European larch, and home-grown Douglas fir. The grade of these timbers, for which the appropriate safe working stress in bending is 800 lb. per sq. in., is the first of a series of grading of structural timber which will be published by the British Standards Institution. Copies of these rules may be obtained from the British Standards Institution, 28, Victoria Street, S.W.1, price 2s. 3d. post free.

Forthcoming Meetings

Oct. 23 (*Thurs.*).—**Egyptian Delta Light Railways Limited** (Ordinary general), 213, Gresham House, Old Broad Street, E.C., at noon.

Notes and News

International Ethiopian Railway Trust & Construction Co. Ltd.—Notice is given in *The London Gazette* that this company has been struck off the register, and is thereby dissolved.

Japanese Railway Accident.—Three coaches of a passenger train between Oita and Kumamoto in Kyushu, Southern Japan, plunged into a river while crossing a bridge on October 8. There were many casualties.

Tramway Proposed for Hainking.—The Hainking Traffic Company (China) proposes to expand its capital to 10,000,000 yuan (about $2,343,000) in order to construct a 14·6 km. (9 mile) street tramway system.

Institution of Electrical Engineers.—At a meeting on October 23 Sir Noel Ashbridge will give an inaugural address as President, and on November 20 Mr. J. S. Forrest will speak on the "Characteristics and Performance in Service of High-Voltage Porcelain Insulators."

Trans-Canada Air Lines.—For the fifth month in succession this year, Trans-Canada Air Lines reported high records for air mail and passengers carried during July. Passengers numbered 9,628, compared with 8,958 in June and 5,098 in July, 1940. Air mail carried in July was 129,243 lb., more than 10,000 lb. more than in June and more than double the load for July, 1940.

The Pacific Electric Railway.—Operating in Los Angeles and vicinity is the Pacific Electric Railway, with what is claimed to be the world's largest electric interurban system. It has 1,075 route miles, serving an area of 5,500 square miles. Some passenger services have been abandoned, but 1,200 trains a day still run between Los Angeles downtown terminals (one subway and one elevated) and suburban points.

Great Southern Railways (Eire).—For the 39th week of 1941 the Great Southern Railways Company reports passenger receipts of £42,113 (against £37,788), and goods receipts of £63,661 (against £56,455) making a total of £105,774 against £94,243 for the corresponding period of the previous year. The aggregate receipts to date are passenger £1,576,312 (against £1,410,435), goods £2,000,946 (against £1,802,328), making a total of £3,577,258 (against £3,212,763).

Runaway Accident in Mexico.—As a result of the breakage of a defective drawbar and of defective brakes, the rear coach of a passenger train from Tampico to San Luis, Potosi, on the National Railways of Mexico, broke loose on a 1 in 25 grade at Zacate, and overturned, after running down hill for about a mile. Four passengers were killed and more than twenty injured.

Abandoned Irish Railways.—The Hammond Lane Metal Co. Ltd. has recently purchased the Clontarf & Hill of Howth Tramroad upon which service was withdrawn on March 30 last (as recorded at page 450 of our April 18 issue). The line embraces about 7¼ miles of track from St. Anne's, Clontarf, to Howth, and the rails, sleepers, and overhead equipment are included in the sale. The Hammond Lane Metal Co. Ltd. has recently dismantled the Dublin & Lucan Light Railway, the Westport to Achill railway, and the Armagh and Keady railway.

Derailment on C.P.R.—A Canadian Pacific Railway Quebec-Montreal express was derailed near Maskinonge, Quebec, on September 30, according to a Reuters report. The dining car plunged into the Maskinonge River and five coaches were derailed. One person was killed. The train was reported to have been travelling at 75 m.p.h.

Canadian Pacific Railway.—Gross earnings for August were $19,990,000, an increase of $4,477,000, and expenses were $16,844,000, or $3,595,000 higher. Net earnings at $3,146,000 were $882,000 more than for August, 1940. For the first eight months of 1941 gross earnings were $139,190,000, an increase of $32,989,000, and the net earnings at $26,261,000 were $8,957,000 greater than for the first eight months of 1940.

Egyptian Delta Light Railways Limited.—At the close of the ordinary general business at the annual meeting of this company on October 23, a resolution will be submitted proposing that the remuneration of the directors shall as from April 1, 1941, be the sum of £2,250 per annum (to be divided among them in accordance with the provisions of Article 90 of the company's articles of association) in substitution for the remuneration fixed by the resolution of July 28, 1920.

C.P.R. Bridge Collapse.—A span of the Canadian Pacific Railway bridge at Sault Ste. Marie, Michigan (opposite the Canadian town of the same name), collapsed recently under a goods train, and the locomotive and tender, falling into the approach to St. Mary's Falls Canal, blocked the two largest Sault Ste. Marie locks, which join Lakes Superior and Huron. The engine driver and fireman were killed. Two channels remained open for navigation, but iron-ore shipments from Lake Superior ports to American steel mills were interrupted.

L.N.E.R. Extension of Time Order.—The Minister of War Transport has made the London & North Eastern Railway (Extension of Time) Order, 1941 (S.R. & O., 1941, No. 1450), extending by three years the time limited by :—(*a*) Section 45 of the L.N.E.R. (London Transport) Act, 1936, for the completion of certain railways at Finsbury Park; (*b*) Section 22 of the L.N.E.R. Act, 1938, for the compulsory purchase of lands at Whetstone, Hucknall, Rugby, Shawell, Ruddington, and south of Hainault station, authorised to be acquired by that Act.

Institute of Transport.—Lord Leathers, Minister of War Transport, will be the chief guest at a luncheon to be held on November 12 at the Connaught Rooms, Great Queen Street, London, W.C.2. Mr. Harold E. Clay, Assistant General Secretary, Transport & General Workers' Union will be the chief guest at a luncheon at the same place on December 10; Air Vice-Marshal Sir Philip Game, Commissioner of the Metropolitan Police, on January 14, and Mr. W. H. Ansell, President of the Royal Institute of British Architects, on February 11. The annual general meeting of corporate members will be held on December 10 at the Connaught Rooms. At the lunch-hour informal meetings the following papers will be read; on November 25, "Operating Problems after the War," by Mr. Charles F. Klapper; on January 20, "Security or Progress (with special reference to transport)," by Mr. M. A. Cameron, and on February 24, "Co-partnership in the Transport Industry," by Mr. C. F. King.

Ransome & Marles Bearing Co. Ltd.—Sir Albert J. Bennett, Chairman of the company, at the annual general meeting recently said that the policy of the company from its inception 24 years ago had always been conservative as to the proportion of its profits distributed in dividends, and the balance had been used for the development of a constantly growing industry. This had proved a great asset to the country in the war emergency and it seemed anomalous that this development should be arrested by crippling taxation at a time when increased production was a paramount necessity. They were promised a return of a proportion of Excess Profits Tax after the war, but in his opinion first things should come first. The company wished to continue in a position where it could pull its full weight while the war was on.

Improved Die for Die-Casting

As the London Passenger Transport Board has decided not to proceed with British patent application No. 15421/40, we publish the following details from the provisional specification, dated October 10, 1940, to place the subject matter on record.

We, Harold Frederick Bassom, of 22, Adelaide Road, Heston, Middlesex, Ronald John Box, of "Instow," Bath Road, Brands Hill, Colnbrook, Bucks., both British subjects and London Passenger Transport Board, a British corporate body, of 55, Broadway, Westminster, S.W.1, do hereby declare the nature of this invention to be as follows :—

This invention is for an improved die for die-casting white metal bearings and has for its object the construction of a die in which the metal is cooled more rapidly, thus permitting of a higher working temperature and improved adhesion of white metal to steel bearing shell.

According to the present invention the die is in two separate parts comprising a bottom half in the form of a rectangular steel block having a concave cylindrical surface underneath and a top half in the form of a steel base plate to which a half cylinder mandrel of aluminium alloy is firmly fixed with the convex surface outwards so that when the two parts of the die are brought together the steel back of the bearing shell fits closely against the concave surface of the bottom half of the die.

The two parts of the die, when brought together, are placed in the usual form of low pressure die-casting machine incorporating a liquid metal pot from which the liquid metal is forced through apertures in the bottom half of the die and bearing shell into the annular space between the top half of the die and the bearing shell which is a close fit inside the bottom half of the die.

It is a feature of the invention that by reason of the use of aluminium alloy for the mandrel in the top half of the die, a high heat conductivity is obtained and the white metal is cooled with greater rapidity than is the case when the usual steel mandrel is used, thus permitting of a higher working temperature which results in improved adhesion of the white metal to the steel bearing shell.

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REVISED LIST OF EXPORT GROUPS *(see opposite page)*

Export Group	Chairman	Secretary	Address
Accumulators	Mr. H. V. Schofield ...	Mr. Edward Powell ...	Grosvenor Gardens House, S.W.1 Tel. : Victoria 2299
Arc Welding Electrodes ...	Major C. P. N. Raikes ...	Mr. A. G. Seaman ...	36, Kingsway, W.C.2. Tel. : Holborn 0502
Black Bolt & Nut	Major C. R. Dibben ...	Mr. E. L. Heathcote ...	25, Bennetts Hill, Birmingham, 2. Tel. : Midland 2901
Brassfoundry	Major C. R. Dibben ...	Mr. E. N. Hiley ...	106, Edmund Street, Birmingham, 3. Tel. : Central 1657
Bright Bolt & Nut	Major C. R. Dibben ...	Mr. E. L. Heathcote ...	25, Bennetts Hill, Birmingham, 2. Tel. : Midland 2901
Bright Steel Bar	Mr. W. H. V. Betts ...	Messrs. Peat, Marwick, Mitchell & Co.	Williams Deacon's Bank Chambers, Church Street, Sheffield, 1. Tel. : Sheffield 24311.
Drawing Office Materials & Equipment	Mr. H. E. McMeel ...	Mr. S. Henderson ...	69, Cannon Street, E.C.2. Tel. : City 4444.
Edge Tool Manufacturers'	Mr. S. D. Walker ...	Mr. F. H. Ratcliffe ...	Chamber of Commerce, Birmingham Tel. : Midland 5021
Electrical Goods & Apparatus	Mr. C. Rodgers... ...	Mr. Felix A. Rogers ...	36, Kingsway, W.C.2. Tel. : Holborn 0502
Electric Lamp Manufacturers'	Mr. W. J. Jones... ...	Mr. H. S. Hayden ...	15, Christchurch Park, Sutton Surrey. Tel. : Vigilant 6072-5
Electric Light Fittings ...	Mr. A. E. Illiffe	Mr. F. A. Rogers ...	Kern House, Kingsway, W.C.2. Tel. : Holborn 0502
Electric Vehicle	Mr. E. H. A. Richardson	Mr. A. C. Cramb ...	2, Savoy Hill, W.C.2. Tel. : Temple Bar 9434
Electricity Meter Manufacturers'	Mr. E. Whitby	Mr. R. N. Gregor ...	Aldwych House, Aldwych, W.C. Tel. : Holborn 2795
Electro-plating, Polishing & Finishing	Major C. R. Dibben ...	Miss J. T. Mountford ...	5, Bennetts Hill, Birmingham, 2. Tel. : Central 5594
Engineers' Tools	Mr. J. H. Barber ...	Mr. T. G. Mander ...	Norris Deaking Building, King Street, Sheffield, 1. Tel. : Sheffield 22391
Expanded Metal	Mr. F. Guise	The Expanded Metal Co. Ltd.	Burwood House, Caxton Street, S.W.1. Tel. : Whitehall 1736
File Trade	Mr. John Green ...	Mr. Cyril Bray	3, Melbourne Avenue, Sheffield, 10 Tel. : Sheffield 61736
Fire Extinguisher Trades' ...	Mr. H. B. Graham ...	Mr. E. S. Howard ...	6, Martin's Lane, Cannon Street, E.C.4. Tel.: Mansion House 7492
Furnace	Mr. G. E. France ...	Miss K. V. Allen ...	Millwood, King's Acre Road, Hereford. Tel. : Hereford 2961
Graphite Products & Carbon Products	Mr. P. Lindsay	Mr. H. E. Finch ...	The Morgan Crucible Co. Ltd., Battersea Church Road, S.W.11. Tel. : Battersea 2250
High Conductivity Copper & Alloys	Mr. A. L. Johnson ...	Mr. A. M. Kennedy, ...	52-54, High Holborn, W.C.2. Tel. : Chancery 8561-2-3
Hollow-ware (Cast Iron) ...	Mr. R. A. Siddons ...	Mr. W. B. Kenrick ...	Archibald Kenrick & Sons, Ltd., Ironfounders, West Bromwich. Tel. : West Bromwich 0212
Insulated Conductors ...	Mr. T. H. Martin Harvey	Mr. K. J. McKillop ...	High Holborn House (4th floor), 49-51, Bedford Row, W.C.1 Tel. : Holborn 2701
Hollow-ware (Wrought Steel)	Mr. C. W. Kenrick ...	Mr. A. H. Ratcliffe ...	Chamber of Commerce, 95, New Street, Birmingham, 2. Tel. : Midland 5021
Ironfounders' (Light Castings)	Mr. W. R. Blair ...	Mr. G. Galbraith-Sneddon	145, St. Vincent Street, Glasgow, C.2. Tel. : Central 2891-2
Light Edge Tool	Mr. R. H. Chope ...	Mr. Walter Bell ...	103, Queen Street, Sheffield, 1. Tel. : Sheffield 25613
Light Spring	Major C. R. Dibben ...	Miss J. T. Mountford, ...	5, Bennetts Hill, Birmingham, 2. Tel. : Central 5594
Lock & Allied Manufacturers'	Mr. C. W. Parkes ...	Mr. V. B. Beaumont ...	The Midland Lock and Allied Manufacturers' Association, Chamber of Commerce, Lichfield Street, Wolverhampton. Tel. : Wolverhampton 20638
Locomotive Industry ...	Mr. F. S. Whalley ...	Mr. J. W. Vaughan ...	82, Victoria Street, S.W.1. Tel. : Victoria 7770
Bearing Manufacturers' ...	Mr. C. Pryke	Messrs. Peat, Marwick, Mitchell & Co.	29, Arthur Road, Wimbledon Park, S.W.19. Tel. : Wimbledon 5091
Boiler Furnace	Mr. A. C. Macharg ...	Messrs. McClelland Ker & Co.	120, St. Vincent Street, Glasgow. Tel. : Central 7385
Boilers (Shell Type) ...	Mr. W. J. Thompson ...	Messrs. Jones, Crewdson & Youatt	7, Norfolk Street, Manchester. Tel. : Deansgate 4677
Boilers (Water Tube) ...	Mr. A. McKinstry ...	Mr. A. M. Fairburn ...	14, Old Square, Lincoln's Inn, W.C.2. Tel. : Holborn 9838
Compressed Air-Engineering	Sir Harry Peat	Messrs. Peat, Marwick, Mitchell & Co.	York Mansions, 94-98, Petty France, S.W.1. Tel. : Abbey 1653
Electrical Machinery ...	Mr. V. Watlington ...	Mr. A. G. Seaman ...	36, Kingsway, W.C.2. Tel. : Holborn 0502
Fan & Ancillary Equipment	Mr. W. A. Davidson ...	Mr. A. G. Marshall ...	2, Howard Street, Strand, W.C.2. Tel. : Temple Bar 1314
Filtration & Silencing ...	Mr. C. G. Vokes ...	Messrs. Peat, Marwick, Mitchell & Co.	York Mansions, Petty France, S.W.1. Tel. : Abbey 1151
Foundry Equipment ...	Mr. G. E. France ...	Miss K. V. Allen ...	Millwood, King's Acre Road, Hereford. Tel. : Hereford 2961
Gear Manufacturers' ...	Mr. Alfred Wiseman ...	Mr. J. C. Birney ...	Bush House, Room 632, Aldwych, W.C.2. Tel. : Temple Bar 6456
Industrial Lubricating Appliances	Col. V. I. Robins, ...	National Union of Manufacturers	6, Holborn Viaduct, E.C.1. Tel. : City 6031
Internal Combustion Engine	Mr. H. L. P. Myles ...	Mr. Herbert Cowper,	11, Tilehurst Road, Reading. Tel. : Reading 5057
Iron, Steel & Metal Works Equipment	Mr. W. Kilpatrick ...	Messrs. Peat, Marwick, Mitchell & Co.	York Mansions, Petty France, S.W.1. Tel. : Abbey 1653
Steam Engine	Mr. I. V. Robinson ...	Mr. I. V. Robinson ...	36, Kingsway, W.C.2. Tel. : Holborn 0502
Steam Raising Plant Accessories	Mr. A. M. Fairburn ...	Mr. F. N. Marcy ...	14, Old Square, Lincoln's Inn, W.C.2. Tel. : Holborn 9838
Water Purification Plant ...	Mr. W. Paterson ...	Messrs. Peat, Marwick, Mitchell & Co.	94-98, Petty France, London, S.W.1. Tel. : Abbey 1829
Machinery Belting Fasteners	Mr. R. A. Beckmann ...	Messrs. Hannaford & Co.	Aldwych House, Aldwych, W.C.2. Tel. : Holborn 8245
Malleable Castings	Mr. A. E. Hurst ...	Miss L. Verity	Tudor House, Bridge Street, Walsall, Staffs. Tel. : Walsall 2722
Motor Industry	Lt.-Col. A. C. R. Waite	Mr. A. V. Tookey ...	c/o The Society of Motor Manufacturers and Traders, Ltd., Hobart House, Wilton Street, S.W.1. Tel. : Sloane 0191
Non-Ferrous Metal (Wrought)	Mr. R. Finch	Messrs. Squiers & Co. ...	115, Colmore Row, Birmingham, 3. Tel. : Central 2474
Paint Industry	Mr. H. S. Mackintosh ...	Mr. A. J. F. Macdonald...	Tavistock House, Tavistock Square, W.C.1. Tel. : Euston 2573
Patented Steel Wire ...	Mr. W. P. Lee	Messrs. Peat, Marwick, Mitchell & Co.	Williams Deacon's Bank Chambers, Sheffield, 1. Tel. : Sheffield 24311
Power Transmission ...	Mr. A. Croft	Mr. E. G. F. Stevenson...	Crofts (Engineers), Ltd., Thornbury, Bradford, Yorks. Tel. : Bradford 4901
Precision Steel Tube ...	Capt. P. G. Carew ...	Mr. T. Gibbs	c/o Accles & Pollock, Ltd., Oldbury, Birmingham. Tel. : Broadwell 1500
Pumps	Sir Harry Peat	Messrs. Peat, Marwick, Mitchell & Co.	York Mansions, 94-98, Petty France, S.W.1. Tel. : Abbey 1653
Rail & Telegraph Accessories	Mr. K. S. Peacock ...	Mr. E. L. Heathcote ...	25, Bennetts Hill, Birmingham, 2. Tel. : Midland 2901
Railway Brakes & Signals ...	Capt. B. H. Peter ...	Mr. J. Griffith Hall ...	82, York Way, King's Cross, N.1. Tel. : Terminus 6432
Railway Carriage & Wagon Accessories	Mr. N. H. Morris ...	Messrs. Peat, Marwick, Mitchell & Co.	11, Ironmonger Lane, E.C.2. Tel. : Kelvin 5108
Railway Carriages & Wagons	Mr. A. J. Boyd	Messrs. Peat, Marwick, Mitchell & Co.	11, Ironmonger Lane, E.C.2. Tel. : Kelvin 5108
Railway Springs	Mr. Wm. Walker ...	Mr. W. H. V. Betts ...	Peat, Marwick, Mitchell & Co., Williams Deacon's Bank Chambers, Church Street, Sheffield. Tel. : Sheffield 24311
Railway Switches & Crossings	Mr. G. D. Cunningham...	Messrs. Macnee & Co....	3, Victoria Street, S.W.1. Tel. : Abbey 5547
Railway, Tyre, Axle & Wheel Manufacturers'	Mr. Albert Good ...	Messrs. Peat, Marwick, Mitchell & Co.	Williams Deacon's Bank Chambers. Sheffield, 1. Tel. : Sheffield 24311
Solid Woven Belting ...	Major W. C. Fenton ...	Mr. C. M. Skinner ...	Jones, Crewdson & Youatt, 7, Norfolk Street, Manchester, 2. Tel. : Deansgate 4677
Stainless Steel Fabricators'	Mr. J. Van Helden ...	Mr. H. Eyles	Birmingham Chamber of Commerce, 95, New Street, Birmingham. Tel. : Midland 5021
Stainless Steel Manufacturers	Mr. C. E. Holmstrom ...	Mr. E. J. Gadsby ...	Wharncliffe House, 44, Bank Street, Sheffield, 1. Tel. : Sheffield 23243
Steel Castings	Mr. W. B. Pickering ...	Messrs. Peat, Marwick, Mitchell & Co.	Williams Deacon's Bank Chambers, Church Street, Sheffield, 1. Tel. : Sheffield 24311
Steel Hinge	Mr. Thos. Crompton ...	Mr. F. W. Oxenham ...	c/o United Hingers Ltd., Spon Lane, Smethwick. Tel. : West Bromwich 0363
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XUM

OFFICIAL NOTICES

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OFFICIAL ADVERTISEMENTS intended for insertion on this page should be sent in as early in the week as possible. The latest time for receiving official advertisements for this page for the current week's issue is 9.30 a.m. on the preceding Friday. All advertisements should be addressed to:—*The Railway Gazette*, 33, Tothill Street, Westminster, London, S.W.1.

Railway and other Reports

Madras & Southern Mahratta Railway Co. Ltd.—The directors announce a final dividend of 3 per cent., namely: guaranteed interest 1¾ per cent., stockholders' revenue account ¼ per cent., and reserve fund (free of tax), 1 per cent., making a total distribution of 5¾ per cent. for the financial year, the same as for 1939-40. Surplus profits amount to £73,164, against £62,158.

Egyptian Delta Light Railways Limited.—Gross receipts in the year ended March 31, 1941, were £248,457 (£216,519) and working expenses £214,324 (£188,028), giving an operating ratio of 86·26 per cent. against 86·84 per cent. The balance carried to net revenue account is £34,133 which, with interest, dividends, etc., from subsidiary companies, gives a total of £43,042. After providing for interest on debentures and for all fixed charges there is a balance of £2,186, to which must be added £35,995 brought forward, making a total of £38,181. This amount is being carried forward. Although the number of passengers fell from 13,327,181 to 11,951,531 coaching receipts rose from £131,105 to £140,462 because of increased fares. Increases in rates also caused an improvement from £81,822 to £104,037 in goods traffic receipts, notwithstanding the fall in tonnage lifted from 695,036 tons to 687,775 tons.

Eastern Counties Omnibus Co. Ltd.—The interim dividend on the ordinary capital is 3 per cent., tax free (same).

Potteries Motor Traction Co. Ltd.—This company, a subsidiary of the British Electric Traction Co. Ltd., has declared an interim dividend of 4 per cent., less tax (same).

Kitchen & Wade Limited.—Interim dividend is 12½ per cent. (same).

G. D. Peters & Co. Ltd.—Interim dividend is 7½ per cent. (same).

Cowans Sheldon & Co. Ltd.—Dividend for year to June 30, 1941, is 10 per cent. (same).

Colvilles Limited.—For the year ending December 31, 1941, the interim ordinary dividend is 3 per cent. (same).

Callender's Cable & Construction Co. Ltd.—An interim dividend is announced of 5 per cent. (same).

United Steel Companies Limited.—For the year to June 30, 1941, the profit balance after depreciation, E.P.T., and debenture interest, is £2,066,625, against £2,256,078. The charge for income tax is £1,341,250, £125,000 (same) is allocated to central reserve for obsolescence, £134,000 (£130,000) to staff funds, and £47,293 (£45,495) to debenture redemption. The final dividend is 5½ per cent., making 8 per cent. for the year (same).

Serck Radiators Limited.—Net profit, after E.P.T. and income tax, for the year to August 2, 1941, amounted to £47,641 (against £57,968). A sum of £15,000 (nil) is allocated to war contingencies reserve, but no transfers are made to buildings reserve or general reserve (£12,500 and £20,000 respectively). The directors again recommend a dividend of 15 per cent., or 3s. a share, and a bonus of 7½ per cent., or 1s. 6d. a share, both tax free, making 22½ per cent., tax free, for the year. It is proposed to carry forward £13,542 (£3,400 after £7,500 to war contingencies reserve).

Contracts & Tenders

The Southern Railway (U.S.A.) has ordered eleven 40½ ft. box wagons of 50-tons capacity from the Pullman-Standard Car Manufacturing Company.

The Pennsylvania Railroad has ordered one steam-turbine passenger locomotive and tender from the Baldwin Locomotive Works and one steam freight locomotive and tender from the company's own shop at Altoona, Pa.

Diesel locomotive orders placed in the United States recently include a 660 b.h.p. Baldwin switcher by the Western Maryland Railroad; one of the same type by the Upper Merion & Plymouth; two 1,000 b.h.p. switchers of the same type by the Elgin, Joliet & Eastern; and a 35-ton switcher of the Davenport Besler make by the Ohio & Morenci. The New York Susquehanna & Western has ordered another two Alco 1,000 b.h.p. diesel locomotives, bringing the total ordered by the line in a month up to eight. The St. Louis-San Francisco has ordered five 1,000 b.h.p. Baldwin switchers; orders placed by the Terminal Railroad Association of St. Louis include three 1,000 b.h.p. and two 660 b.h.p. Alco switchers and three 1,000 b.h.p. and two 660 b.h.p. locomotives of Baldwin make.

Export Groups

With the progress of the war it has been necessary to make changes from time to time in the export policy of Great Britain. In putting into effect this policy the Government makes use, through the Export Council of the Board of Trade, of the Export Groups which have now been formed for practically all trades. *The Board of Trade Journal* has recently published a complete and revised list of these Export Groups with particulars which include the name of the Chairman and Secretary and the address to which communications should be sent. A selection of groups likely to be of interest to readers of THE RAILWAY GAZETTE is on the opposite page. The fact that an Export Group is in being for a particular trade does not indicate, of course, that in present conditions that trade is actively engaged in either seeking or supplying overseas markets, nor should the fact that goods made of raw materials in short supply due to war conditions are advertised in this paper, be taken as an indication that they are necessarily available for export.

British and Irish Railway Stocks and Shares

Stocks	Highest 1940	Lowest 1940	Prices Oct. 10, 1941	Prices Rise/Fall
G.W.R.				
Cons. Ord.	52	22¼	40	− 2
5% Con. Pref.	103¼	58	100½	—
5% Red. Pref. (1950)	105¼	88	103	—
4% Deb.	107½	90½	109½	+ 2
4½% Deb.	108¼	96½	110	+ 1
4½% Deb.	114¾	96	115½	—
5% Deb.	124	106	129	+ 1
2½% Deb.	66½	57	66	—
5% Rt. Charge	117¾	97	124½	—
5% Cons. Guar.	117	90½	120½	—
L.M.S.R.				
Ord.	24⅞	9	15½	− ¼
4% Pref. (1923)	60¼	21⅛	47½	− 3
4% Pref.	70¾	35	61½	− 2
5% Red. Pref. (1955)	94½	60	92½	—
4% Deb.	101¾	81	101½	—
5% Red. Deb. (1952)	109½	102	110½	—
4% Guar.	93¼	65	94½	—
L.N.E.R.				
5% Pref. Ord.	8⅜	1½	2¾	—
Def. Ord.	4⅜	1¾	1½	—
4% First Pref.	60	20	46½	− 3
4% Second Pref.	22⅞	6½	17	− 1
5% Red. Pref. (1955)	80	34½	76½	—
4% First Guar.	86½	56	85¼	—
4% Second Guar.	77¼	37	75½	—
3% Deb.	73½	54½	75½	—
4% Deb.	97⅛	74	100½	—
5% Red. Deb. (1947)	107	96¾	103	—
4½% Sinking Fund Red. Deb.	104	98	101½	—
SOUTHERN				
Pref. Ord.	79	34	61½	− 1
Def. Ord.	22½	7	13½	− 1½
5% Pref.	104½	58¾	98½	—
5% Red. Pref. (1964)	105	85	103½	—
5% Guar. Pref.	116¾	90	121½	—
5% Red. Guar. Pref. (1957)	114⅞	94	111¾	—
4% Deb.	106¾	84½	106½	—
5% Deb.	122½	100	126½	—
4% Red. Deb. (1962-67)	106	96½	105	—
4% Red. Deb. (1970-80)	106⅛	93	105	—
FORTH BRIDGE				
4% Deb.	95½	87	96½	+ 2
4% Guar.	93½	81½	96½	+ 2
L.P.T.B.				
4½% "A"	116	103	113½	—
5% "A"	121½	107	122½	—
4½% "T.F.A."	105½	101	101½	—
5% "B"	116	102	113½	—
"C"	65½	24	41	− 1
MERSEY				
Ord.	26	18½	20½	—
4% Perp. Deb.	92½	86½	95½	—
3% Perp. Deb.	68	63	70½	—
3% Perp. Pref.	57	50½	56	—
IRELAND				
BELFAST & C.D.				
Ord.	4	3	4	—
G. NORTHERN				
Ord.	4½	1½	7	—
G. SOUTHERN				
Ord.	12½	4	5½	+ ½
Pref.	15½	6	6½	—
Guar.	36	15	27½	—
Deb.	55½	40	50½	—

Railway Stock Market

The war news from Russia has had a depressing influence on the stock and share markets, where demand was at a much reduced level, and consequently there was a general reaction in security values. Nevertheless, in most directions the set-back was not heavy, and selling pressure was not pronounced apart from various groups of shares which were recently the centre of a good deal of speculative activity. High-class investment securities maintained a firm undertone, sentiment having been assisted by the satisfactory tendency in British Funds, which in part reflected the fact that in due course the large weight of money awaiting investment will be further increased by proceeds arising from the decision to requisition South African loans. The main factor dominating markets is the continued evidence of willingness of investors to be prepared to take the long view, which is indicated by the firmness with which all classes of securities are held. In fact, in numerous directions they have remained in moderate supply, because the lower prices have induced very little selling.

As was to be expected, junior home railway stocks were affected by the reactionary tendency on the Stock Exchange, but on balance the decline in most instances was moderate in character. The market was disappointed by fears that recent hopes of early publication of the full text of the financial agreement with the Government are unlikely to be realised. Nevertheless, the view prevails that dividends on the junior stocks are likely to be maintained, and it is being pointed out in some quarters that, if war damage were treated by the railways entirely as a charge against capital to be dealt with over a period of years, slightly improved dividends would be possible on various of the junior stocks. Whereas junior stocks were lower in price, debentures and other prior charges have been firm, and small gains were recorded among the latter. It is now widely realised that yields on home railway prior charges compare favourably with those on other leading investment stocks, and that with the prospect of British Funds and other investment issues showing a tendency to lower yields and higher prices over a period, railway prior charges will probably be in increased demand.

Great Western ordinary stock, which was 41¾ a week ago, has moved back to 40 at the time of writing, but on the other hand, the preference stock was maintained at par, and the 4 per cent. debentures rose further from 109 to 110½. Among L.M.S.R. issues, the ordinary declined from 16⅛ to 15⅛; the 1923 preference was no better than 47½, compared with 50½ a week ago; and the senior preference lost three points to 61. L.M.S.R. 4 per cent. debentures, however, were fractionally higher at 102½. L.N.E.R. 4 per cent. debentures held their recent improvement to 101, and the 3 per cent. debentures were slightly higher at 76½. There was also a satisfactory tendency in this company's guaranteed stocks, the firsts having been maintained at 86, and the seconds at 75½ were within half a point of the price ruling a week ago. Nevertheless, there has been selling of L.N.E.R. preference stocks; the first preference reacted from 49½ to 47, and the second preference was 17, as compared with 17¾ a week back. Southern issues showed a similar trend to those of the other main line stocks, prior charges having tended to move better; junior stocks were reactionary. The 4 per cent. debentures were 107½, comparing with 107 a week ago. On the other hand, the preferred stock declined from 63½ to 61 and the deferred from 14⅜ to 13⅜. London Transport "C," 42¼ a week ago, was lowered to 40½, but the senior stocks further improved; the 4½ per cent. "A" were 114, and the 5 per cent. "B" 114¾.

There was a general decline in South American railway securities, the set-back in markets having been followed by some profit-taking. Nevertheless, the lower prices were attributed mainly to decreased speculative buying, partly because it is realised that the financial results of the Argentine companies, due next month, must be expected to make a disappointing showing.

Traffic Table of Overseas and Foreign Railways Publishing Weekly Returns

	Railways	Miles open 1940–41	Week Ending	Traffic for Week: Total this year	Traffic for Week: Inc. or Dec. compared with 1940	No. of Weeks	Aggregate Traffics to Date: Totals: This Year	Aggregate Traffics to Date: Totals: Last Year	Aggregate Traffics to Date: Increase or Decrease	Shares or Stock	Prices: Highest 1940	Prices: Lowest 1940	Prices: Oct. 10 1941	Yield % (See Note)
				£	£		£	£	£					
South & Central America	Antofagasta (Chili) & Bolivia	834	5.10.41	26,910	+ 12,170	40	759,840	686,330	+ 73,510	Ord. Stk.	11¼	3½	7¼	Nil
	Argentine North Eastern ...	753	4.10.41	ps. 195,900	+ ps.27,500	14	ps. 2,823,600	ps.2,452,300	+ ps.371,300	,,	3¾	1	3	Nil
	Bolivar	174	Sept., 1941	4,137	+ 347	39	34,854	35,970	− 1,116	6 p.c. Deb.	6½	5	6¼	Nil
	Brazil	—	—	—	—	—	—	—	—	Bonds	8	5	6	Nil
	Buenos Ayres & Pacific ...	2,801	27.9.41	ps.1,183,000	+ ps.33,000	13	ps.16,734,000	ps. 14,479,000	+ps.2,255,000	Ord. Stk.	4¼	1	6	Nil
	Buenos Ayres Great Southern	5,082	27.9.41	ps.2,316,000	+ps.647,000	13	ps.26,726,000	ps. 24,385,000	+ps.2,341,000	Ord. Stk.	10⅜	3	9	Nil
	Buenos Ayres Western ...	1,930	27.9.41	ps.1.004.000	+ps.380,000	13	ps.10,268,000	ps. 8,011,000	+ps.2,257,000	,,	8⅜	2	6	Nil
	Central Argentine	3,700	4.10.41	ps. 1,877,800	+ps.515,250	14	ps.25,235,800	ps. 19,671,100	+ps.5,584,700	,,	8¼	2	6	Nil
	Do.	—	—	—	—	—	—	—	—	Dfd.	4	¼	2	Nil
	Cent. Uruguay of M. Video	972	27.9.41	23,900	+ 4,323	13	276,261	229,409	+ 46,852	Ord. Stk.	3¼	¼	5	Nil
	Costa Rica	188	Aug., 1941	22,983	+ 758	9	47,559	40.856	+ 6,703	Stk.	23⅛	14	13	15⅜
	Dorada	70	Aug., 1941	12,450	− 850	34	100,750	98,500	+ 2,250	1 Mt. Db.	99	97½	97	6⅛
	Entre Rios	808	4.10.41	ps.284,100	+ ps.39,000	14	ps. 4,181,000	ps. 3,351,500	+ ps.829 500	Ord. Stk.	4	¼	4½	Nil
	Great Western of Brazil ...	1,016	4.10.41	11,700	+ 500	40	357,000	389,100	− 32,100	Ord. Sh.	4/-	1/-	¼	Nil
	International of Cl. Amer. ...	794	Aug 1941	$404,818	+ $49,964	35	$3,889,669	$4,079.630	− $189,961	—	—	—	—	—
	Interoceanic of Mexico ...	—	—	—	—	—	—	—	—	1st Pref.	9d.	9d.	¼	Nil
	La Guaira & Caracas... ...	22¾	Sept.,1941	6,180	− 2,060	39	58,005	60,300	− 2.295	—	6	4	—	—
	Leopoldina	1,918	27.9.41	32,859	+ 8,484	39	1,005,241	872,417	+ 132,834	Ord. Stk.	2⅛	¼	3½	Nil
	Mexican	483	30.9.41	ps. 453,500	+ ps.27,000	13	ps. 4,077,700	ps. 3,547,800	+ ps.529,900	,,	2/11½	⅛	¼	Nil
	Midland of Uruguay ...	319	Aug, 1941	12,516	+ 1,310	9	27,026	21,592	+ 5,434	—	—	—	—	—
	Nitrate	386	30.9.41	6,148	− 822	39	107,301	135,087	− 27,786	Ord. Sh.	2¾	1	3	4⅛
	Paraguay Central	274	4.10.41	$3,653,000	+ $414,000	14	$47,029,000	$50,599,000	− $3,570,000	Pr. Li. Stk.	41	36	42¼	7⅛
	Peruvian Corporation ...	1,059	Sept.,1941	77,057	+ 13,209	13	214,265	198,447	+ 15,818	Pref.	4	1	4	Nil
	Salvador	100	28.6.41	c12,723	+ c1,600	52	c804,130	c981,987	− c177,857	—	—	—	—	—
	San Paulo	153½	28.9.41	36,250	+ 6,695	39	1,453,015	1,415,171	+ 37,844	Ord. Stk.	50	23	43½	4⅞
	Taltal	160	Aug., 1941	5,985	+ 3,520	8	9,165	4,550	+ 4,615	Ord. Sh.	15/1½	⅜	½	Nil
	United of Havana	1,346	4.10.41	17,232	+ 2,158	14	265.831	219,699	+ 46,132	Ord. Stk.	⅜	½	2	Nil
	Uruguay Northern	73	Aug, 1941	1,337	+ 358	9	2,693	1.926	+ 767	—	—	—	—	—
Canada	Canadian National	23,560	30.9.41	1,694,316	+ 396,112	39	44,062,402	35,683,198	+ 8,379,204	—	—	—	—	—
	Canadian Northern ...	—	—	—	—	—	—	—	—	Perp. Dbs.	86	68	92½	4⅛
	Grand Trunk	—	—	—	—	—	—	—	—	4 p.c. Gr.	105¾	95½	101½	3⅛
	Canadian Pacific	17,153	30.9.41	1.205,200	+ 186,400	39	31,691,600	24,369,600	+ 7.322,000	Ord. Stk.	9⅞	4⅜	10½	Nil
India†	Assam Bengal...	1,329	—	—	—		—	—	—	Ord. Stk.	99⅜	71	100	3
	Barsi Light	202	31.7.41	14,782	− 7,980	18	67,635	56,587	+ 11,048	—	—	—	—	—
	Bengal & North Western ...	2 099	Sept.,1941	231,525	− 4,522	26	1,530,171	1,514,900	+ 15,271	Ord. Stk.	283	234	307	5⅛
	Bengal-Nagpur	3,269	10.7.41	222,300	+ 27,943	14	2,552,246	2,417,662	+ 134,584	,,	96	83¾	100¼	4
	Bombay, Baroda & Cl. India	2,986	30.9.41	317,850	+ 46,800	26	5,198 250	4,856,250	+ 342,000	,,	108	99	107½	5⅛
	Madras & Southern Mahratta	2,939	31.7.41	200,250	+ 39,623	18	2,427,279	2,107,868	+ 319,411	,,	104	97⅞	102⅛	7⅛
	Rohilkund & Kumaon ...	546	Sept., 1941	41,025	− 4,737	26	347,627	347,049	+ 578	,,	284	238	300	5⅛
	South Indian	2,500	10.7.41	160,572	+ 36,257	14	1,424,269	1,268,823	+ 155,446	,,	93¾	83	97½	4⅛
Various	Beira	204	July, 1941	74,593	—	43	727,546	—	—	—	—	—	—	—
	Egyptian Delta	610	20.7.41	7,047	+ 2,422	16	74,113	51,576	+ 22,537	Prf. Sh.	7/10½	⅜	2	Nil
	Manila	—	—	—	—	—	—	—	—	B. Deb.	53	44½	64⅝	5⅛
	Midland of W. Australia ...	277	May, 1941	17,591	+ 3,683	48	167,924	145,304	+ 22,620	Inc. Deb.	88	80	89½	6⅛
	Nigerian	1,900	28.6.41	44,945	− 12,185	13	697,968	499,238	+ 198,730	—	—	—	—	—
	Rhodesia	2,442	July, 1941	464,690	—	43	4,682,300	—	—	—	—	—	—	—
	South Africa	13,291	16.8.41	785,433	+ 68,629	20	14,684,614	13,246,644	+ 1,437,970	—	—	—	—	—
	Victoria	4,774	May, 1941	986,485	+ 241,016	48	—	—	—	—	—	—	—	—

Note. Yields are based on the approximate current prices and are within a fraction of ¼ Argentine traffics are given in pesos
† Receipts are calculated @ 1s. 6d. to the rupee